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LS, INC.

1990 REVIEW COMMITTEE

REPORT ON LITIGATION SUPPORT

May 11, 1990

CONFIDENTIAL ATTORNEY
WORK-PRODUCT

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I. EXECUTIVE SUMMARY

A. Mission of 1990 Review Committee

The 1990 LS, Inc. Review Committee (hereinafter the "Review Committee") was requested by three members of the LS, Inc. Board of Directors to review the current operations, utilization and overall efficiency of LS, Inc. (sometimes hereinafter referred to as "LS") in the discharge of its litigation support mission. The Review Committee was comprised of E. Frederick Beihl, Leo P. Dreyer and Terence Carlson, all of Shook, Hardy & Bacon. Francis K. Decker, Jr. of Webster & Sheffield provided invaluable counsel and input throughout the project. Messrs. Bezanson and Nims were invited to attend or participate, but were unable to do so.

The primary objective of the 1990 Review was to undertake an operational review of an organization which requires substantial dollar expenditures and involves key areas of defense preparation. Although the Board of Directors reviews operations on at least an annual basis, it is noted that the last review of this type was undertaken in 1986.

A second objective of the 1990 Review was to analyze how the Board of Directors can be assisted in its ongoing monitoring of LS operations and services to provide more detailed communications between the directors, the users and LS management.

The third objective of the 1990 Review was to contribute recommendations to the Board of Directors concerning the structure, organization and operations of LS so as to assist the Board of Directors in its oversight of the delivery of litigation support services by LS, in the most cost-effective, efficient manner, with the maximum confidentiality appropriate to the delivery of those services.

To meet the objectives of this Review, and in so doing to analyze the operations, expenditures, and the utilization of LS services, it was necessary to conduct on-site interviews at LS and to interview users of LS services, as well.

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B. Overview of the LS Organization

LS, Inc. was formed in 1983 as a centralized paralegal organization to assist, and work under the supervision of, the tobacco industry's retained litigation counsel in preparation for and the defense of smoking and health litigation. The Board of Directors of LS is composed of trial attorneys who have control over and determine the policies of LS. The sole shareholders of LS are the six major U.S. cigarette manufacturing entities that comprise a major portion of the domestic cigarette manufacturing industry. All six manufacturers are defendants in smoking and health litigation. All six companies signed shareholder agreements which provide that each person elected as a director of LS shall be a shareholder's lawyer who is actively involved in litigation relating to smoking and health.

All funding for LS has been and is provided through law firms representing the companies in smoking and health litigation. Under the Service Agreements entered into by LS and each of the four law firms represented on the Board of Directors, LS is expressly authorized "to perform services for and provide information [to the retained law firms] in connection with their preparation for and defense of tobacco and health cases on behalf of certain of their clients." In accordance with the Service Agreements, the only individuals having access to the services of LS are lawyers and paralegals of the four law firms who have signed Service Agreements, or law firms acting as their designees. All employees of LS, in turn, are instructed that with respect to the services of LS they are permitted to communicate only with the authorized personnel working under the direction of authorized law firms.

Based upon historical, work product and cost allocation considerations, LS is composed of two divisions: (1) the Literature Retrieval Division ("LRD") which primarily performs a database and library function of identifying, assembling, analyzing, indexing, storing and retrieving biomedical literature within the Scope of Coverage: Current Practice (the "Scope") as determined and from

time to time revised, by the Board of Directors; and (2) the Case Support Division ("CSD") which performs, in addition to analytical functions, the identification, gathering, indexing, storing, and retrieving of information and documents relating to witnesses. As noted above, the distinction between LRD and CSD is due to (1) the history of LS and its predecessor organizations, (2) the allocation of funding among the companies, and (3) the application of the work product doctrine.

Administratively, LS is organized into two major groups: Operations, under the Chief of Operations, W.J. Cavanagh, which includes Accounting, Computer Operations, Human Resources, Library Production Services, Office Services, and Systems and Programming; and Information Services, under the direction of R.A. Piscitelli, which includes Analysis, Data Control, Editorial Services, Library Services, and User Services. Although the two administrative groups of LS work together in meeting the goals and objectives of LS, Information Services provides the majority of the substantive and analytical work associated with medical-legal documentation, the smoking and health library, and the witness files. Operations provides support and production services, including bibliographic data entry. An LS administrative organization chart is enclosed at Appendix C.

LS scans approximately 500 journals on a regular basis, as well as a number of published and computerized secondary sources, selecting articles for the smoking and health database. Included are articles on all subjects defined by the Scope. Articles are indexed and abstracted for the database and are also retained in hard copy by LS. Currently, LS holds approximately 188,000 documents and selects and processes approximately 12,500 new articles in an average year.

LS maintains one of the largest, most comprehensive smoking and health libraries in existence. Approximately 1,000 texts and references are reviewed each year by LS and the library collection presently stands in excess of 10,000 volumes.

In addition to the foregoing, LS has maintained thorough and comprehensive files on witnesses in tobacco and health litigation. Although approximately 249 witnesses are currently "active," the witness files include approximately 5,400 witnesses who have had some involvement in the litigation dating back to the early 1960s. These files are maintained in the database or in a "hard copy" form at LS for use and reference in connection with the tobacco and health litigation.

LS, in reviewing the literature, prepares abstracts and indexes articles using descriptors or classification codes determined from the methods of processing procedures applied by LS. Data entry is conducted at LS and magnetic tapes are prepared for shipment to a service bureau, Martin-Marietta in Orlando, Florida, which converts the magnetic tape format into a format that can be used by BRS Information Technologies, which maintains the software and hardware used for the LS database. The actual "LS database" is loaded on BRS computers located in Oak Brook, Illinois. Updates to the database are made twice monthly. The database located at BRS is accessed online via remote terminals, most of which are at LS. However, two of the user law firms also use remote terminals for accessing the database. LS trained many of the individuals at the law firms who use the database.

C. Methods of Review of the 1990 Review Committee

The Review Committee met on several occasions with Dr. Frederick B. Giller, President of LS, Inc., the Chiefs of Information Services and Operations and certain managers at LS. The meetings included extended discussions of the operations, as well as a tour of the facilities. Where appropriate, LS provided documentation concerning points under discussion, some of which is incorporated in this Report.

The Review Committee interviewed users from Shook, Hardy & Bacon; Webster & Sheffield; Chadbourne & Parke; Jones, Day, Reavis & Pogue; Arnold & Porter; Jacob, Medinger & Finnegan; Womble,

Carlyle, Sandridge & Rice; and F.G. Colby & Associates. Specific evaluations were sought concerning the responsiveness of LS during trials, including Cipollone. Various materials relating to the Munn discovery and the issue of the discoverability of LS were also reviewed and considered as were other documents and materials provided by LS. An overview of plaintiff's discovery efforts regarding LS in Munn is set forth at Appendix B.

D. 1990 Review Committee Evaluation

It is the Review Committee's evaluation that the core functions of LS, which are discharged in furtherance of its central mission, are indispensable to the effective handling and management of the smoking and health litigation. This view is directly supported by user evaluations (see Section VIII, infra).

The primary activities of LS which relate to the maintenance and enhancement of the smoking and health database, the acquisition and maintenance of the smoking and health library, the maintenance of the literature/article library, and the acquisition and maintenance of the witness files are all essential functions which are best performed on a coordinated and consolidated basis on behalf of the industry.

User evaluations indicate that LS receives uniformly high marks for User Services, when LS operates in the primary areas of smoking and health database creation and management, witness files, smoking and health library operations, and database search and retrieval relating to these functions.

The Analysis Department within the Information Services group also receives uniformly high marks from its users. The Analysis Department provides detailed analysis of case-specific issues in addition to performing other analytical functions.

With the possible exception of the document depository, the Review Committee has not detected any material duplication of effort (i.e., LS and the outside law firms basically doing the

same task) or a duplication of staffing (i.e., persons retained by the law firms and by LS doing essentially the same type of work).

E. Specific Recommendations

Based upon the review conducted by the Review Committee, the following specific recommendations are made with the acknowledgement that the Board of Directors and LS management considered issues addressed by some of the recommendations at some time in the past:

1. The primary functions of LS relating to the smoking and health database, the smoking and health library, the acquisition and maintenance of the witness files, work on the litigation points, significant development updates, database search, retrieval and analysis, and related work should be continued, with full support of the Industry.

2. A study of the options for obtaining an online back-up to the BRS database should be considered.¹ Such a study could include an evaluation of whether the smoking and health database could be cost-effectively moved in-house at LS.

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1. The entire smoking and health database operation essentially has no online back-up outside of BRS. Although perhaps remote, if anything were to happen to the smoking and health database located at BRS, through power failure, equipment failure, bankruptcy or other corporate disability, sabotage, theft, or any other disruption, there is no online back-up to the database. If the BRS database "went down" during an active period of litigation or during trial, there would simply be no online back-up source available. This is a management question which has been under discussion by the Board of Directors, and which may merit further consideration in the future. Any further review of this point should evaluate at least two issues: First, if the tempo of litigation increases and if the Scope is gradually expanded, are the risks of proceeding without online back-up greater? Second, would a back-up or dual online system provide any additional capacity for rapid expansion of LS services if the demands of the litigation increase rapidly?

3. The possible replacement of the Alpha-Micro computer equipment at LS should be reviewed.² This upgrade of equipment could pay immediate dividends in terms of efficiency and productivity at LS, and could also lay a foundation in terms of computer equipment and work practices which might allow for more rapid expansion of services by LS should the need arise. The computer support review could also consider providing each User Services literature analyst with in-office terminal access to the BRS database.³ Any such review should include consideration of appropriate security measures such as computer security and database password protection.

4. Because the mission of LS is to provide delivery of paralegal services under the guidance and supervision of retained litigation counsel, every opportunity should be undertaken to promote communication between litigation counsel users and LS. Thorough and frequent communication and interchange, including user visits, are encouraged by LS and should be pursued by the users with the overall objective of providing an improved and continually more responsive level of service.

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2. The Alpha-Micro computer equipment which prepares the computerized input for the smoking and health database could perhaps be replaced with state-of-the-art equipment from a major manufacturer such as IBM. The objectives of a replacement, if any, would be (i) to upgrade the equipment, (ii) to obtain equipment from a major vendor such as IBM for benefits of service and technical upgrades, (iii) to obtain lower-maintenance, state-of-the-art equipment, and (iv) to eliminate the transitional step of sending magnetic tapes to Martin-Marietta in Orlando, Florida, and maintaining the batch system version of the database.
3. Presently, access is established via several terminals located in a central terminal room at LS. Operations could perhaps be made more efficient, the LS literature analysts could perhaps be more productive, and the opportunity for expanding the workload could perhaps be increased significantly if an investment were made to provide all of the LS analysts who work directly with the LS database with in-office computer terminals, dedicated phone lines and modems for direct access to the BRS database from their individual offices.

5. It is recommended that the Board of Directors continue to review, on an ongoing basis, the scope and content of the Minutes of the meetings of the LS Board of Directors.

6. The LS Document Depository Function should be reviewed, and if appropriate, should be dismantled after Cipollone and Cipollone-related litigation.⁴ At present, users report that the document depository is not complete, and as a consequence is not used. Correspondingly, LS reports virtually no use of, or reference to, the depository.

7. The Board of Directors' support for and encouragement of the work regarding enhancement for the pre-1966 collection of articles should be continued, and such enhancement should remain as one of the goals and objectives of LS.

8. Standard practice at LS has been that, as poor hard copy or microfilm are discovered, they are replaced by LS with new copies. In addition, in the last two years there has been an on-going effort, as time allows, to examine the older documents that are substandard. However, because of the importance of the document library, consideration should be given to undertaking a management study to evaluate (i) whether environmental factors in the document storage area are optimum to prevent physical document deterioration, (ii) whether the rigors of recurring photocopying require duplicate sets of some of the "high-use" documents in the document library,

4. The LS document depository function was apparently intended to provide a depository location for company documents produced in litigation. However, both the LS staff and the users report that the document depository is not complete, with the end result that it is little used, if used at all. The present level of inactivity regarding the document depository suggests that the depository may involve an unnecessary allocation of space and may represent an unnecessary duplication on behalf of the Industry. Nevertheless, inasmuch as the document depository was originally designed to be a collection of Cipollone documents, perhaps it should be maintained at LS until the disposition of Cipollone and Cipollone-related litigation. At the conclusion of this litigation, consideration shall be given to the termination of the depository.

(iii) whether document management techniques such as a check-out system for documents, perhaps by using computerized bar codes, should be implemented to enhance efforts to maintain the integrity of the document collection, and (iv) whether a back-up set of the documents is needed and, if so, if it can be put in place in a cost-effective manner. In addition, the physical quality, age and state of preservation of the microform products should perhaps be reviewed. Physical deterioration of the LS reference tools could present a real and substantial problem if not addressed in a timely fashion.

9. When one trial is ongoing, LS begins to prioritize requests. For example, with the Kotler trial ongoing in 1990, users report that LS asked them to prioritize requests, since LS could not meet all requests, and meet the demands of the Kotler trial at the same time. Thus far, the prioritizing of requests and the good communication fostered by LS have not created any conflicts. However, the Review Committee believes that Dr. Giller and the Board of Directors may want to engage in a management "contingency study" which would evaluate, realistically, the demands which may be made upon LS, and the litigation response of LS, in the event of multiple trials. The Manager of Human Resources at LS reports an ability to obtain consulting help or temporary help to meet certain emergency staffing needs. In addition, overtime provides some flexibility. However, there may be practical limitations on how quickly, and how extensively, LS can expand operations to meet rapidly increasing litigation needs. The "contingency study" is therefore recommended as a way to anticipate and to plan for possible demands which could be placed upon LS.

10. It may be appropriate for the Board of Directors to commission a current review of the work product protection presently accorded to LS in light of the discovery in the Munn case. Such a review would supplement work which has already been undertaken.

11. The Board of Directors and LS should continue their ongoing efforts to evaluate whether the coverage of foreign literature should be expanded and, if so, in what manner.

12. The Board of Directors may want to encourage ongoing efforts aimed at developing possible environmental tobacco smoke ("ETS") litigation points for eventual consideration by the Board of Directors in a budgetary context.

13. LS and the Board of Directors may want to explore further the feasibility and efficacy of providing monthly reports on the time spent by professional staff in responding to substantive (non-routine) user requests. Information on hours allocated to specific projects is presently recorded at LS and could be made available. Such information might offer more precise management information than statistics on the number of major and minor requests.

14. The Review Committee notes that historically the budget of LS has increased annually to provide the necessary level of industry support. Although the number of user requests has not increased in proportion to the budget, the overall level of LS operations is maintained at a scope and breadth necessary to meet industry needs. Full-service support during trials and improvements in database and witness-related services, indispensable to the industry's efforts, are not as readily measurable as user requests. Not reflected in statistics on user requests are LS's contribution in analysis of literature for litigation arguments and preparation of special reports on topics such as asbestos, pesticides and ETS. Nonetheless, as a planning tool, it may be worthwhile for the Board of Directors to reconsider the efficacy of three- or five-year budget projections for LS expenditures to help chart and anticipate the cost of a thorough defense.

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II. CENTRAL MISSION OF LS

The Central Mission of LS, has been restated in the 1990 LS Statement of Goals and Objectives as follows:

- * Identify, acquire, analyze, index, process, store and retrieve documents defined by:
 - a. Scope of Coverage (sometimes referred to as "Scope")
 - b. Lung Cancer and General Litigation Arguments
 - c. C.O.L.D. Litigation Arguments
 - d. Active Witness List
- * Process User Requests and provide Current Awareness Services.
- * Assist users in preparation for trials and depositions and during trials.
- * Maintain and update the Document Depository, Library and Document collections.

III. INFORMATION SERVICES

An LS 1990 organization chart is included in this Report at Appendix C. The chart in Appendix C summarizes the administrative organization of LS. The work of Information Services, headed by Rosalie A. Piscitelli, Chief of Information Services, is summarized, in part, on the Flow Chart which is included at the end of this Report at Appendix D. The Information Services departments are discussed in alphabetical order, in the manner listed in the LS organization chart.

A. Analysis

The Analysis Department is under the direction of Donna Barrett and is located within Information Services. From a functional standpoint, the Analysis Department is identified as falling within the Case Support Division. Under the 1990 budget, the Analysis Department includes a salary allocation for five persons in addition to the Manager, Donna Barrett, for a total of \$162,500 in terms of budgeted compensation.

Work in the Analysis Department includes literature and witness analysis. The Analysis Department has direct user contact in much the same way as the User Services Department has. Personnel in Analysis do not search the LS database. Analysis is not engaged extensively in journal or monograph scanning. The Analysis Department is heavily involved in cases, particularly close to trial, and much of that work is done in a close relationship with the trial lawyers. Analysis reviews depositions and performs other case-oriented work, mainly for those firms that are its principal users.

Donna Barrett works in close contact with Analysis Department users and most requests for Analysis Department services are routed through Ms. Barrett. If the request involves the delivery of LS services which can best be handled by another group within LS, Ms. Barrett or her staff will route that request to the appropriate department. Because the Analysis Department responds

to user requests, its overall work is somewhat similar to that of the User Services Department.

B. Data Control

Data Control is located administratively within Information Services. From a functional standpoint, Data Control is part of LRD.

For 1990, Data Control is authorized to have four positions at a total budgeted annual salary for all four positions of \$101,500.

The Data Control function within Information Services is primarily a quality control function relating to computer operations. It is through this group that LS monitors the accuracy of data and the overall integrity of the database. Data Control issues monthly reports summarizing document production and database update activity.

C. Editorial Services

The Editorial Services Department is located administratively within Information Services. From a functional standpoint, Editorial Services is allocated to the LRD. The Manager of Editorial Services is Owen McShane. Editorial Services is one of the largest groups within the LS operation with employment authorization for approximately 32 employees and consultants and a 1990 budgetary allocation of \$782,550. Editorial Services has two assistant managers.

Editorial Services, with assistance from the User Services Department, identifies in-scope biomedical literature from the routine scanning of approximately 500 journals and a large number of secondary source materials. LS estimates that approximately 150,000 documents are scanned each year. From that universe, approximately 12,500 documents are selected each year for analysis, editorial treatment and inclusion in the database. Editorial and User Services personnel must be conversant with the Scope. The

Scope is reviewed and revised periodically by the Board of Directors, and incorporates all smoking and health issues raised in the Surgeon General's Reports or by tobacco industry defense attorneys.

Of the 12,500 articles selected each year, approximately 8,000 are initially coded on a limited basis, pursuant to methods of processing ("MOP") with classification codes only. The remainder of the documents are reviewed pursuant to MOP with partial or full abstracting and indexing. Some documents are initially reviewed on a "codes only" basis in order to get them in the system quickly. These are later selected for "enrichment" or "enhancement" in a recycling process. Basically, this amounts to a selection for more in-depth analysis, abstracting and indexing.

Documents which are abstracted and indexed by the twelve abstractors in Editorial Services are reviewed by the nine editors in the Department. The editors and abstractors are in a virtual "one to one" staffing relationship in large part because of the very important quality control function of the editors as to the final database work product. Many of the editors have in excess of ten years tenure with LS and ten years of experience in interpreting the Scope. The editorial review also determines whether the article is fully retrievable as indexed.

Editorial Services is also involved in documenting the litigation argument points. Documents in support of litigation points are reviewed for supporting data and information, for strength of support and for negative caveats. This information is indexed and textually documented. The LS database presently contains in excess of 8,000 lung cancer and general points documents, 3,200 C.O.L.D. points documents and 275 addiction points documents. The addiction points analysis has been discontinued.

The LS production goals for 1990 indicate that Editorial Services is projected to select and analyze 12,500 documents from primary and secondary sources, including 1,000 documents from the pesticides and pre-1966 lung cancer and lung emphysema literature

and 500 from the "old book" project. 1990 goals indicate that 4,500 of the 12,500 documents are to be completely processed "prospectively" during 1990.

The production goals for Editorial Services further indicate that Editorial Services is to recycle or "enrich" approximately 5,000 documents during 1990. Of those 5,000 documents, approximately 3,400 will be analyzed for support of lung cancer or general litigation arguments and 400 documents will be analyzed for C.O.L.D. litigation argument support.

Editorial Services also contributes to the development and preparation of special reports, such as reports dealing with tobacco pesticides, multistage theories of lung carcinogenesis, environmental tobacco smoke, etc.

Editorial Services staff also provides back-up to User Services/CSD Analysis during periods of peak activity.

D. Library Services

The Library Services Department is located within Information Services and is under the supervision of Shauna Bryson, the Manager. The 1990 budget allocation calls for approximately 29 positions, 22 of which are allocated to the Identification and Acquisition (CSD) sub-group, and the other seven positions are allocated to the traditional Library (LRD) operation for a total budgetary allocation of \$623,150.

In addition to witness identification, acquisition work and library operations, Library Services is responsible for the tobacco company-produced document depository which is located on the 6th floor. However, because this document collection is apparently incomplete, it is not frequently accessed by the users of LS, and does not require a significant staffing commitment by Library Services personnel (i.e., less than one person).

The library function of Library Services is the traditional library operation of LS and includes an associate manager, a senior librarian, a senior library technician and four library

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technicians. This group manages LS's comprehensive tobacco and health library. The library is responsible for collecting and maintaining the substantial reference, subject monograph, journal, congressional hearing and technical report collection that routinely is used to satisfy user requests, provide documents for database input, and provide original copy for court presentation.

The "CSD operation" of Library Services maintains thousands of files on active or potential witnesses, both from the defense side and the plaintiffs' side, with files, data and information dating back to the early 1960s. The Identification and Acquisition group collects biographical information, news reports, public statements, testimony and publications by or about witnesses. Presently, Library Services has hardcopy files on 249 active witnesses and 5,400 preliminary or inactive witnesses. As information is received on new witnesses listed in litigation or otherwise identified, Identification and Acquisition will identify references involving the witnesses and acquire those from sources locally, or elsewhere, as necessary. The CSD function of Library Services frequently does work on international witnesses and, in the process, is increasingly using international directories and other foreign resources.

Library Services provides monthly and semi-annual reports to LS users listing active witnesses being handled by LS. Generally speaking, an ongoing effort is made to remove inactive witnesses from the Active Witness List as a cost-saving measure. Monthly reports documenting the activities of the Library Services Department also are issued.

E. User Services

The User Services Department is located administratively within the Information Services section of LS. User Services is under the management direction of Gloria S. DeGregori. For purposes of functional allocation, User Services is deemed to be located within the Literature Retrieval Division of LS. For 1990, User

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Services has a budgetary allocation of \$396,300 for 14 full-time positions.

In addition to the Manager, the User Services Department has eight literature analysts and support staff.

Approximately 10% of the User Services' time commitment is devoted to scanning major biomedical journals to identify articles for the database and to look for breakthrough articles. The scanning function of User Services is focused on a core of major journals, as well as the Wall Street Journal, New York Times and Washington Post. This function is handled within User Services because of the day-to-day contact which User Services has with LS users.

User Services receives requests from all LS users. When a request is received by User Services, the user is carefully interviewed as to the nature of the request. Based upon this information, database searches are formulated and executed. In addition to the LS database, User Services also has access to several hundred commercial databases. User Services reviews the literature search results and selects documents as appropriate. Depending upon the user request, the documents may be analyzed and annotated and a response sent out to the user in accordance with the request. Typically, User Services does not "return" its analytical work product to the LS database, but rather retains it in "hard copy" or personal computer files.

In addition to responding to user requests, User Services also provides selective dissemination of information ("SDIs") to the users. These are current awareness updates in the form of bibliographies on selected topics which are disseminated to users on a periodic (typically monthly) basis. Some of the SDIs are annotated at the request of the users.

User Services also identifies and distributes "Special Interest Documents" ("SIDs") to all user firms. These documents are generally the "break through" articles identified during the

scanning process noted above. Editorial Services also identifies candidate documents for User Services' evaluation of SIDs.

As with other departments of LS, an important aspect of the operation of User Services is quality control. For up to "one year on the job" everything prepared by a User Services analyst is examined by a supervisor. An intense analyst/supervisor interface continues even after the first year. On major projects, a cross-section of the staff or the entire staff may be involved in helping to develop the response to the user request. Periodically, "test problems" are run to test the search approach and capabilities of the various analysts. In many instances the "test problems" will be taken from pending user projects.

User Services maintains the 188,000-document library which is the hard copy format of the LS database.

The User Services analysts typically do not have direct, in-office access to the LS database. Rather, most access is undertaken from a "terminal room" which has a number of computer terminals which can access the LS database at BRS. However, because the number of terminals is less than the number of User Services' staff who may be searching the LS database, access could be denied a staff member simply because all the terminals are in use at any one particular time.

User Services handles the photocopying of the hard copy documents from the 188,000-document library of smoking and health articles. Because there may be a number of requests pending at any one time, there is some strain placed upon the procedures for accessing and copying the documents, as well as upon the document control procedures. The microfilm copies of documents alleviate this problem to some extent. In addition, there is concern regarding the deterioration of the "original" documents in the 188,000-document library. This deterioration may result from three principal causes. First, the photocopies or reprints of documents may be on paper which itself is deteriorating. This is perhaps an aging document/paper quality problem. Second, repetitive handling

and copying of the documents, particularly important articles, generates wear and tear on the documents. Third, and perhaps a lesser factor, the documents are not stored in any archival conditions which would specifically control humidity, temperature or other environmental factors.

The collection of over 188,000 documents maintained by LS in the User Services library has enough shelf space for three to four years of expansion in the collection. Beyond that, additional space will have to be taken for the hard copy library. It appears that the configuration of the floors is such that non-contiguous expansion space may have to be taken on another floor, with the attendant inefficiencies which would result from having the hard copy library located on two floors in non-contiguous space.

F. Relationship of the Administrative Organization to the LS Mission

The administrative organization of LS relates to the central mission, as follows:

1. Scope of Coverage Documents:
 - * Acquire [J. Dennett/J. Waitz]
 - * Identify, analyze, index, proofread [O. McShane]
 - * Process and store [R.A. Piscitelli]
 - * Retrieve [G.S. DeGregori]
2. Lung Cancer, General and C.O.L.D. Litigation Arguments:
 - * Acquire [J. Dennett/J. Waitz]
 - * Identify, analyze, index, proofread [O. McShane]
 - * Process and store [R.A. Piscitelli]
 - * Retrieve [G.S. DeGregori/D. Barrett]
3. Witness File Documents:
 - * Acquire [J. Waitz]
 - * Identify, process and retrieve [S. Bryson]
 - * Witness analysis [D. Barrett/G.S. DeGregori]
 - * Process and store [R.A. Piscitelli]

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- * Retrieve [S. Bryson/D. Barrett]
- 4. User Requests and Current Awareness Services:
 - * Biomedical [D. Barrett/G.S. DeGregori]
 - * Witness Files [S. Bryson]
- 5. Trial and Deposition Preparation:
 - * Acquire and summarize medical and case records of active cases for staff [D. Barrett/S. Bryson/G.S. DeGregori/S. Luca]
- 6. Maintenance:
 - * Document Depository and Library Collection [J. Dennett]
 - * User Services Document Collection [S. Slaughter]
 - * Witness File Document Collection [J. Waitz]
 - * Editorial Services Document Collection [D. Sandoval]

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IV. OPERATIONS DEPARTMENTS OF LS

The Operations departments of LS are headed by the Chief of Operations, W.J. Cavanagh. The Operations section is broken down on the administrative chart (see Appendix C) into Accounting, Computer Operations, Human Resources, Library Production Services, Office Services, and Systems and Programming. All corporate groups fall within LRD. Operations provides all support functions for the central mission and for the overall operation of the corporation. The work of Operations is summarized, in part, in the flow chart at Appendix D.

A. Accounting

The Accounting Group performs functions traditionally associated with a corporate accounting department.

B. Computer Operations

The Computer Operations Department, under the direction of Kevin Timmons, falls administratively within the Operations section of LS and from a functional standpoint is designated as a part of LRD.

Computer Operations maintains, operates and controls the Alpha-Micro computers and peripheral equipment used for data entry, document recycling and housing the "private paragraph" data (or litigation arguments data) at LS, Inc. Using the Alpha-Micro hardware, LS generates magnetic tapes which are then forwarded to a service bureau, Martin-Marietta in Orlando, Florida, where they are converted to a format which can be used by BRS to update the LS smoking and health database. A "batch-system" version of the database is also maintained in Orlando, Florida, as an emergency back-up. The Orlando facility also generates Computer Output Microform ("COM") tapes for LS. From these COM-produced tapes, LS is provided with a microfiche copy of the database KWIC (key-word-in-context or a permuted listing of database descriptors). This product is used by analysts in devising search strategies from over 90,000

descriptors in the LS database. Other COM products include microfiche cross-references (terms linked to document accession numbers). Included are cross-references for descriptors, authors and authors' affiliations.

In 1990, the Computer Operations Group has a budgetary authorization of \$196,255 which is allocated to eight positions.

C. Human Resources

The Human Resources Department is located within Operations and is responsible for the administration of employee benefit programs, the administration of personnel policies and procedures, employee relations, EEO compliance, certain employee training programs, salary administration and recruiting.

Mary Boyle, Manager of Human Resources, stated that it is difficult for LS to hire professionals, because of LS requirements that they have a biomedical background and analytical skills. In addition, the editorial professionals must have good writing skills. These requirements are difficult to meet. On the other hand, she stated that very few job applicants expressed an unwillingness to work on behalf of the tobacco industry.

Ms. Boyle said there were few complaints with the salary structure. She felt the salaries paid are competitive and that the benefit programs are excellent. In addition, professionals (but not managers) are not exempt from overtime.

Ms. Boyle stated that the turnover was highest within the first two or three years of employment. In 1989, LS lost two or three professionals and about ten clerical persons. She stated that analysts seemed to turn over more, perhaps because their work is repetitive. The editorial staff turns over less, and once one becomes an editor, that person tends to stay.

Ms. Boyle stated that in the event of an increase in litigation and a corresponding increase in demand upon LS, she could easily hire temporary library and clerical help. With respect

to the professional staff, if needed she thought she could hire certain former employees on a consulting basis.

All in all, Ms. Boyle disclosed no major problems in the hiring or retention of personnel. Ms. Boyle stated that the staff morale was good and that the staff generally enjoyed the challenge of additional work necessitated by litigation.

All job applicants sign non-disclosure agreements and, in addition, all employees of LS sign non-disclosure agreements at the time of employment.

D. Library Production Services

The Library Production Services Department is located within Operations. Library Production Services, which is under the direction of Anne Siebenhoven, has a 1990 staffing allocation of approximately 19 positions at a budget of \$416,500. Library Production Services is responsible for accessioning, bibliographic functions and data capture and entry of all documents in the LS smoking and health database. Library Production Services is also responsible for the production and distribution of all microfilm and microcopy products.

The bibliographic function of Library Production Services is conducted by seven librarians, who typically have MLS degrees. The librarians perform bibliographic data entry for the database. Various data "fields" are created by the bibliographic work including tertiary authors, grantor information, and authors' affiliations. All terms are automatically checked by the computer pursuant to a "standard authority system" such that only authorized terms may be used in the bibliographic references. The librarians use and rely on recognized bibliographic standards.

The Library Production Services Department includes the document accessioning clerks and the data entry operators. The function of reviewing and providing computer bibliographic input also generates author cards for the library. Library Production Services also produces the microform materials as a back-up to the

hard copy files. These materials include microfiche copies of the original articles as well as microcopies of bibliographic information, LS abstracts, and index terms or classification codes. Fifteen sets of these microform products are produced, and eight of those sets are sent to authorized users. Four sets are used at LS, and three sets are stored in a security warehouse for use at trials.

It takes five to eight weeks from the accessioning of an article until it reaches the database. Priority is given to important articles identified at the journal scanning stage, and those articles are processed more quickly. Each article has an accession number assigned to it which is the same for the hard copy and the microform versions, as well as its accession number in the database.

E. Office Services

In 1990, the Office Services Group is budgeted for one part-time and three full-time positions at \$84,100. The Review Committee did not interview any staff from this Group.

F. Systems and Programming

In 1990, Systems and Programming is budgeted for four full-time positions at \$172,500. This section has not yet been reviewed in detail by the Review Committee. The overall review and evaluation of LS's computer operations and database management may be an on-going management consideration and, if undertaken, would extend beyond the existence of the 1990 Review Committee.

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V. THE CSD/LSD ORGANIZATION

Functionally, LS is divided into two operating divisions, the Literature Retrieval Division ("LRD") and the Case Support Division ("CSD"). The functional division is of primary importance in: (i) implementing the budget allocation among the companies; (ii) addressing the work product issues; and (iii) recognizing the historical roots of LS.

A. LRD

From a financial allocation standpoint, the LRD includes the following groups identified on the administrative organization chart and discussed in more detail in other sections of this report:

- * Editorial Services
- * Corporate Management
- * Accounting
- * Office Services
- * Human Resources
- * Library Production Services
- * Systems & Programming
- * Data Control
- * Computer Operations
- * User Services
- * Library Services (the actual Library portion of this Department)

B. CSD

For purposes of financial allocation, the remainder of the operation falls within CSD. CSD develops and maintains files on all designated plaintiffs' and defendants' expert witnesses and treating physicians who are identified in the ongoing litigation. These materials include all documents which are written by or about the individual expert witness. There are approximately 250 "ongoing" witnesses, and copies of complete witness files may be requested from LS.

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From an administrative standpoint CSD includes the following operations:

- * Library Services (the Acquisition and Identification Section of the Department)
- * Analysis

C. Cost Allocation Based Upon LRD/CSD Formula

The four law firms who utilize the services of LS pursuant to Service Agreements are billed by LS as indicated in the Service Agreements. The costs allocable to LRD are billed on a shareholder market share basis, whereas the costs allocated to CSD are billed on a per capita basis. The total 1990 LRD budget is \$6,927,100; the total CSD budget for 1990 is \$2,145,950.

As reported in the 1990 budget,⁵ certain expenses are allocated between the LRD and CSD. The allocation is based on the ratio of each Division's labor pool to the total LS labor pool. For purposes of this calculation, the CSD labor pool includes the Identification and Acquisition group (22 employees) and the Analysis Group (six employees). Together they account for approximately 20% of the LS labor pool. Therefore, the allocation of expenses to CSD for 1990 is 20%, and the remaining 80% is allocated to LRD. These expenses include:

RENTAL EXPENSES

Office Space & Escalations

Real Estate Taxes

Occupancy Taxes

MISCELLANEOUS EXPENSES

Telephone and Installation

Warehousing Expense

Insurance

Interest Expense

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5. The paragraphs in this Section dealing directly with the LRD/CSD allocation are taken from the 1990 LS Budget.

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Corporate Tax Expense
Equipment Maintenance
Cleaning & Maintenance
Miscellaneous Expense
Depreciation/Amortization

SUPPLIES

Production & Office Supplies
Copier Supplies & Overage

OUTSIDE SERVICES

Auditing & Tax Services
Payroll Charges

FURNITURE, EQUIPMENT, LEASEHOLD

Furniture & Equipment - Non-Capital Expense
Leasehold Improvements

The 80:20 allocation ratio also is applied to that portion of Pension Expenses budgeted for the services of a Directed Trustee and an Investment Advisory Service and to the allocation of Other Income. Legal fees are allocated on a different basis, which is described in Note 16 to the 1990 Budget of LS.

The 1990 budget further reports that with the exception of certain labor charges described below under Resource Sharing Services, consistent with CSD's designation as a User, there are no allocations to CSD for costs relating to updating the databases, providing database searches, producing microfilm and microcopy, translating or certain incidental expenses. These charges, of the type noted below, are allocated 100% to the LRD Division.

DATABASE UPDATES

EDP Service Bureau
Data Processing Supplies

DATABASE SEARCHES

Commercial Database Search
LSI Database Search

MICROFILM/MICROCOPY

TRANSLATIONS

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INCIDENTAL EXPENSES

Safe Deposit Box

Telecopier

Postage Meter

Postage & Mailing

All other expenses are budgeted as they apply specifically to LRD or CSD and are not based on the 80:20 or 100:00 allocation ratio. These expenses include:

PAYROLL EXPENSES

MISCELLANEOUS EXPENSES

Office Temporaries

Recruiting Costs

Messenger Service & Shipping

Management Expense

Memberships & Dues

Special Training Expenses

LIBRARY EXPENSES

SUPPLIES

Library Supplies (50:50 Allocation)

OUTSIDE SERVICES

Consultants

FURNITURE, EQUIPMENT, LEASEHOLD

Furniture & Equipment - Capital Expense

Computer Equipment

Computer Software

The 1990 budget states that resource sharing avoids duplication of certain expenses between LRD and CSD. CSD receives the full resources and support of LRD's management personnel, established procedures and information storage and retrieval systems. Additionally, the budget notes certain LRD personnel perform tasks for CSD as part of routine operations or during periods of peak activity.

Resource sharing services billed to CSD are budgeted in 1990 at \$396,400. This amount was calculated by adding a prorated

percent of the salaries of LRD management and other personnel who are responsible for, or who will provide, resource sharing services. Resource sharing services allocated to LRD in 1990 will be \$80,800. This amount was determined by adding 50% of the salaries of the Library Staff, which is included in the CSD budget.

Because of the apparent complexity of the LRD/CSD billing structure, the Review Committee considered whether the LRD/CSD distinction should be continued. At this time, the Review Committee has concluded that (i) the LRD/CSD formula was not unduly burdensome to LS, and (ii) at present, it would be better to maintain the LRD/CSD approach than trying to rework and renegotiate the formula when any resultant changes might not change the cost allocation in any significant way.⁶

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6. The distinctions between LRD and CSD are important in terms of financial allocations among the companies and in terms of applying the work product doctrine. However, the LRD/CSD nomenclature is not important when requesting LS services. Consequently, Francis K. Decker, Jr., for one, does not suggest any changes to the budgeting allocations as they are applied through LRD functions and CSD functions. Mr. Decker indicates that the budgeting format which has been established is working, given the basic assumptions and objectives that were used when LS was established. Mr. Decker does not see any need for fine-tuning or for renegotiation of the budgeting allocations.

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VI. MANAGEMENT REVIEW AND OVERSIGHT

The management oversight of LS is primarily provided by the Board of Directors and the President, Dr. Frederick B. Giller. The accounting firm of Pannell, Kerr & Forster provides an annual audit and prepares the annual financial statements for LS.

A. Board of Directors

The Board of Directors of LS is made up of six directors who are litigation attorneys in law firms representing tobacco companies in smoking and health litigation. The Board of Directors currently includes Thomas E. Bezanson of Chadbourne & Parke; Michael A. Nims of Jones, Day, Reavis & Pogue; Francis K. Decker, Jr. of Webster & Sheffield; Charles R. Wall, Robert E. Northrip, and David K. Hardy of Shook, Hardy & Bacon.

The Board of Directors has the primary role of determining policy and directing the operations and overall effort of LS. To discharge this function, the Board of Directors meets from time to time to address issues which may influence or affect the management of LS. In addition, the Board of Directors considers and addresses the operational issues which are necessary to keep LS functioning in its paralegal position.

The Minutes of the Board meetings tend to focus upon the business, financial and management issues of LS. The Board of Directors, at its meetings, also discusses litigation issues which the Board of Directors has previously determined not to include in the Minutes. However, because one of the Board of Directors' primary contributions to the work product protection is the oversight of the litigation-related activities of LS, the Minutes could perhaps routinely document, in general terms, these discussions of litigation-related issues.

B. Dr. Frederick B. Giller

Dr. Frederick B. Giller has been the President of LS since its inception. He provides the overall management for LS. Dr.

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Giller began his employment with the former Literature Retrieval Division at the Council for Tobacco Research - U.S.A., Inc. ("CTR") in 1971. Prior to that, he had served as the project officer for Information Interscience Incorporated ("3i"), the predecessor of LRD. Since the formation of LS in 1983, Dr. Giller has served as its President.

Dr. Giller received his B.A. from Temple University in 1958, and his M.S. in biology and his Ph.D. in pharmacology from Philadelphia College of Pharmacy and Science in 1962 and 1965, respectively. As President of LS, responsible to the litigation attorneys who serve on the LS Board of Directors, Dr. Giller supervises the day-to-day operations and management of LS.

Dr. Giller employs a management-by-objectives approach to management and requires the development of goals and objectives within the various divisions and departments at LS.

C. Accounting Firm

Pannell, Kerr & Forster provides an annual accounting review of LS and as a part of that process renders annual financial statements.

VII. FACILITIES, EQUIPMENT AND CORPORATE OBLIGATIONS

A. Lease and Real Estate Taxes

The following information on the LS lease and taxes was taken essentially from the 1990 LS Budget.

LS has lease obligations extending to August 1999. The 1989 budget provided funds for office space and escalations, real estate and occupancy taxes and certain leasehold improvements at 800 Second Avenue, N.Y., N.Y., for the seventh and eighth floors for the year and for a portion of the sixth floor through May 31, 1989.

The obligation for the ninth floor space was part of an arrangement that was entered into in December 1986 to avoid moving from the current location at a time of impending trials. The ninth floor commitment was for the period February 1, 1989, through August 1999. Since LS did not need this space when it became available, LS set out to reduce its obligation and to provide options for future expansion. After negotiations, the landlord agreed to take back the ninth floor in exchange for a coterminous lease for 8,500 sq. ft. of space on the sixth floor, a portion of which LS subsequently subleased.

Background information regarding the availability of the ninth floor and details regarding the negotiations and subleasing arrangements and request for a supplemental budget are presented in correspondence to the LS Board of Directors dated October 24, 1988, May 1, 1989, and September 25, 1989.

The 1990 budget includes funds for office space and escalations and real estate and occupancy taxes for the seventh and eighth floors and for 8,500 sq. ft. of the sixth floor. LS reports that the 1990 budget is \$265,900 less than the 1989 budget because of one-time costs that were incurred in 1989 and because of an accounting reclassification from this account to a capital account of certain costs relating to the December 1986 acquisition of the eighth floor. LS retains 5,375 sq. ft. of the sixth floor space, of which LS currently occupies 1,500 sq. ft., and has subleased the

remaining 3,125 sq. ft. Projected income from this sublease will total approximately \$113,000.

The 1990 budget for real estate taxes substantially exceeds the amount paid in 1989, due to the fact that during 1989 the building in which LS rents space was sold, prompting a major reassessment as of July 1989, resulting in substantially higher taxes, for which LS has some proportional responsibility, pursuant to its lease.

B. Alpha-Micro Computer Equipment

The Alpha-Micro computer system is owned by LS and operated by the Computer Operations group of LS. The Alpha-Micro computer system is used to prepare computer tapes containing input for the LS smoking and health database. These magnetic tapes are then provided to Martin-Marietta in Orlando, Florida, for conversion to a BRS-compatible format.

LS has service contracts for the two Alpha-Micro computers. One computer serves as a back-up for the other unit.

The Alpha-Micro equipment is not state-of-the-art and is certainly not from a major vender. The equipment may be anticipated to generate increasing maintenance costs if not replaced.

C. Smoking and Health Database

The online system for the LS smoking and health database is handled by BRS.⁷ The BRS computer facilities are physically located at BRS Data Center, 2000 Clearwater Drive, Oak Brook, IL 60521 (312-654-6000).

As noted above, the input to the LS database is prepared using the Alpha-Micro computer system at LS. LS personnel are responsible for preparing the substantive input that goes into the

7. Dr. Giller provided information to the Review Committee documenting that BRS Information Technologies is a part of the corporate holdings of Ian Maxwell.

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database. The input from the Alpha-Micro computer system is forwarded to Martin-Marietta in Orlando, Florida, and converted from the Alpha-Micro format to the BRS format. This is then provided to BRS and BRS updates the LS database twice per month. Copies of the tapes that are used to update the database are provided to LS, Shook, Hardy & Bacon and a security warehouse facility in Ft. Lee, New Jersey. Another copy is held by Martin-Marietta. Thus, there are four copies of the tape input to the database. However, there is only one functional, online database. LS also maintains one "batch system" version of the smoking and health database in Orlando, Florida, as an emergency back-up, but online access to this version of the database is not possible.

If for some reason BRS would not be online and accessible, then there would be no online access to the LS database. However, BRS does have its back-up systems for operating its various databases.

LS reports that BRS moved its computer operations for commercial and private databases in 1989 from Latham, New York, to Oak Brook, Illinois. This site was chosen after BRS was acquired by Maxwell Communication Corporation. Maxwell also had acquired Pergamon ORBIT Infoline, Inc. (ORBIT Search Service) and the Official Airline Guides, Inc. which gave Maxwell five data centers in Oak Brook. This data center was chosen because it had more computer power (over 100 Million Instructions Per Second), an emergency power supply, expanded online storage space (more than 400 gigabytes) and an extensive network monitoring facility.

LS reports that BRS operates on Hitachi Data Systems XL 70 computers. There are three XL 70s at the Oak Brook data center. The LS database is stored on one of these, and the other two serve as back-ups. In the event all three XL 70s were to fail, a Hitachi EX 90 computer at an undisclosed location in Illinois presumably would handle all processing needs.

In the event of a disaster in Illinois that would destroy both BRS locations, two Hitachi XL 70s located in Latham, New York,

are available for processing. All database and systems software are backed-up and stored in a high-security, off-site, undisclosed location. All computer rooms are equipped with HALON and emergency generators.⁸

Dr. Giller stated that the overhead factor at BRS is low, when compared to similar operations; he rates the search system as superior; and he regards the BRS search software as ideal for support of the smoking and health database and litigation.

The LS database as loaded on BRS does not presently contain all of LS's work product. The current BRS version of the database contains 188,000 documents of which approximately 171,000 documents meet the criteria set forth in the Scope of Coverage and the remaining 17,000 documents are written by or about a witness, but do not meet the Scope criteria. For these records, the database contains bibliographical information along with abstracts, index terms or classification codes as appropriate. Other LS work product is stored in-house at LS on the STAR system. This includes witness document analyses and litigation argument analyses for both lung cancer and C.O.L.D. points.

The documents with textual analyses data that currently reside within the STAR system will soon be merged with the parent records on the BRS version of the database. LS has approached this project in stages and has developed test databases with BRS. The merger of the STAR and BRS files is proceeding on schedule, but the schedule must be flexible in order to accommodate 1990 trial schedules. Eventually, the merger of the files will provide (1) online access (via BRS) to witness and litigation argument analyses; (2) a full-text searching capability (for searching paragraphs within lengthy abstracts); and (3) an enhanced proofreading capability.

8. BRS Technical Systems Support is provided by BRS Information Technologies, 1200 Route 7, Latham, NY 12110 (800-345-4BRS). BRS Administration & Marketing is provided by BRS Information Technologies, 8000 Westpark Drive, McLean, VA 22102 (703-442-0900).

The decision was made to merge the LS work product files on BRS because STAR has proved incapable of handling the large volume of lengthy records that LS maintains.

To gather additional information for the Board of Directors and LS to possibly further evaluate the BRS database, the following questions have been submitted to LS for possible future input from LS:

1. What is the current size of the LS database (the STAR version containing "private paragraph" data)? Include the total number of records, average record size and total database size in bytes.
2. What is the projected annual growth rate of the database?
3. What is the ratio of raw data to indexed data on BRS?
4. What are the costs for data storage at BRS? Costs for searching? Costs for offline printing, tape storage, other services?
5. What programming services does BRS offer? Any other kinds of customer services?
6. What software options besides BRS Search have you evaluated? Why was BRS Search chosen? Do you feel it is the best software option available today?
7. Does Martin-Marietta in Orlando convert Alpha-Micro tapes for both BRS and the 3i batch search system?
8. Could BRS convert Alpha-Micro tapes?
9. Can BRS produce the KWIC dictionary?
10. What alternatives are there to using the 3i System for quality control?
11. Would it be more cost-effective to run the system in-house rather than time-share? How long would it take to recoup the start-up costs of a new in-house system (hardware, software, programming, etc)?
12. If the necessary hardware and software were available and the LS database were brought in-house at LS, Inc., how many

simultaneous users (data entry operators and searchers) would the system have to support?

D. Library

The library at LS may be one of the largest, most complete working libraries on smoking and health anywhere. Holdings presently exceed 10,000 volumes with a current annualized accession rate of approximately 1,000 volumes.

E. Contracts and Obligations

In addition to the office lease, LS has leases extending to 1993 for telephone equipment and copy machines. LS has a defined contribution retirement plan for all eligible employees which LS has funded in the past.

F. Document Depository

The sixth floor at LS contains an industry document depository of documents "produced" in litigation. One person in Library Services has responsibility for this "collection." LS has been requested not to index the collection, such that LS performs essentially a warehouse function. LS reports virtually no usage of the collection; the users reported no use of the collection. Usage is not likely since users regard the collection as incomplete.

The senior librarian at LS, Jean Dennett, provided the Review Committee with the following information on the collection:

American: 21 linear feet (Grinnell and Flynn)

Brown & Williamson: 11 linear inches (Dewey)

Liggett: 17 linear feet (Cipollone)

Lorillard: 85 linear feet (and 4 inches of large advertisements) (Cipollone)

Philip Morris: 71 linear feet (and 4 inches of large advertisements) (Cipollone)

Tobacco Institute: 24 linear feet (Cipollone, Carlisle and Tully)

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In addition, LS has about 5-6 linear feet of duplicate Cipollone documents. No Reynolds or CTR documents are stored at LS.

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VIII. USER REPORTS ON THE DELIVERY OF SERVICES BY LS

In order to accurately review use of LS, the Review Committee conducted interviews of all major the LS-user firms. Detailed reports of these "user interviews" are provided in an attempt to provide an overall LS-user profile developed at essentially one point in time (January-February 1990).

A. User Report: Webster & Sheffield

In a meeting with Francis K. Decker, Jr. on Friday, January 12, 1990, Mr. Decker provided extensive input concerning the Webster & Sheffield usage of LS. Basically, Decker characterizes LS as "invaluable" and "irreplaceable."

As a member of the Board of Directors, and as a frequent, New York user of LS, Decker believes that he has a good working relationship with LS and also has reasonably-current knowledge as to the status and operations of LS.

Decker and Webster & Sheffield essentially use a "client representative" concept in that frequent contact is made of the same person or individual at LS, despite the nature of the specific request. Frank Decker works primarily with Donna Barrett, Manager of the Analysis Group within the Information Services Division, for LS assistance, even though on any particular project, Donna Barrett may not be the one actually doing the work. By developing a close relationship with one or more of the employees of LS, Frank Decker believes that he is able to provide background concerning the cases that he is working on, as well as the type and nature of his request. Decker believes that providing some appropriate case information to LS pays dividends in terms of responsiveness and intelligent input to requests that are made. He also emphasizes that by providing LS with more case-specific information, LS is able to develop and provide more innovative solutions to user requests. He cites examples of LS investigative leg work to find documentation he was requesting when basically all that he provided was the nature

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of the information that he needed, leaving the investigation avenues entirely open to the judgment of those at LS.

Frank Decker finds LS to be efficient and responsive in the delivery of services. He particularly points to the service and turn-around time provided by LS during the Cipollone trial, and the evening and weekend "trial schedules" established by LS to provide an appropriate level of services, as needed, in the Cipollone context.

Decker has found that before and during the Cipollone trial, LS was able to "balance priorities" among conflicting requests, with the help of the users. For example, Decker pointed to the instance when Webster & Sheffield and Chadbourne & Parke had a conflict concerning deadlines on major projects. The priority and schedule were negotiated so that LS could meet the conflicting demands in an orderly fashion, while still serving the needs of two, primary users.

Decker summarizes by concluding that Webster & Sheffield "cannot do without it [LS]." Decker indicates that he has periodic discussions with his client concerning LS and the delivery of services provided by LS. As a result, he does not believe that there are any unanswered concerns of Liggett regarding LS. Decker believes the budgeting allocation is working, and would not recommend any changes to that allocation. Decker would not make any changes to the organization or to the location of the organization and specifically would not want to make any changes which would disturb the "team" at LS. He concludes that the personnel at LS have been "through the wars" and have developed experience in handling and processing requests in terms of what a lawsuit involves. He believes that the personnel at LS can gear their work more closely to what actually is required to handle and defend lawsuits. In terms of dealing with LS, Decker has experienced no "communication failures."

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B. User Report: Chadbourne & Parke

On February 1, 1990, the Review Committee met with Audrey Wilner of Chadbourne & Parke to obtain that firm's user input concerning LS. Thomas Bezanson had planned to attend but a Kotler pretrial prevented his participation.

The basic evaluation of LS by Chadbourne & Parke is that LS is "very expensive" but is "indispensable" and "irreplaceable" insofar as the litigation is concerned. Audrey Wilner reported that no existing database can duplicate the LS database and, as such, the LS database represents a one-of-a-kind resource for the tobacco industry. The only alternative to the consolidated industry approach to a literature retrieval system would be to have the individual clients "gear up" on their own.

Although the expense of LS is certainly a factor, it appears that Chadbourne & Parke regards LS as an irreplaceable resource. As noted by Audrey Wilner, as new issues come up, the literature and background do not have to be developed from scratch, but rather can be considered and evaluated based upon an existing database.

Chadbourne & Parke has internally gone to a procedure of coordinating their requests through one or two paralegals employed by Chadbourne & Parke. The paralegals, in turn, deal directly with representatives of LS. Chadbourne has found this to be of some assistance in avoiding duplication of requests to LS, and in establishing uniform channels of communication. Occasionally, Chadbourne needs to re-emphasize with LS that the priorities established by the paralegal in making the user request are, in fact, the priorities of the lawyers working on the cases. Generally, however, LS is responsive to the Chadbourne & Parke requests.

Chadbourne & Parke submits a variety of requests to LS, some of them massive in nature, some of them narrowly focused. Chadbourne has approximately 15 to 16 legal assistants working on tobacco litigation, with at least two who are science-oriented. Chadbourne does not intend to duplicate the services of LS or to

duplicate the analytical work that LS is undertaking. However, Chadbourne & Parke is starting to do some work in-house. In particular, Chadbourne is establishing a database of medical articles and data with notes by the Chadbourne lawyers. Because of concerns about possible disclosure of LS materials in discovery, Chadbourne is reluctant to provide attorney notes to LS for inclusion in the LS database. As will be recalled, other firms such as Webster & Sheffield are submitting lawyer comments and notations for possible inclusion in the database.

Bruce Sheffler and Thomas Riley are also users of the LS work product. When Audrey Wilner contacts LS, she generally contacts Donna Barrett of the Analysis Group within the Information Services Division.

Chadbourne & Parke has found LS to be "very helpful" and "constantly available" during trial. They provide "very good service." Chadbourne & Parke quite frankly acknowledges that some element of the satisfaction with the general day-to-day service of LS may relate to the fact that both organizations are located in New York City.

Chadbourne & Parke receives and uses the SDIs and finds that "they are very useful." Chadbourne does not use the LS microform products, finding that it is difficult to maintain the files. Chadbourne & Parke does occasionally find that LS may "over analyze" or "analyze to death" a particular request and as a consequence may provide too much information. Although this is a comment mentioned by other users, Audrey Wilner notes that further, more detailed communication between Chadbourne & Parke and LS might alleviate, to some extent, inappropriate responses by LS.

Chadbourne & Parke does its own medical record review in-house and does not make requests of LS for medical record reviews. However, Chadbourne & Parke may provide LS with case-related information such as a case chronology which will contain a medical history. Such information is thought to be helpful to LS to provide the staff at LS with case-related background information.

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Chadbourn & Parke does not rely upon the company document depository. Because it is viewed as incomplete, if Chadbourn needs document depository information they will call the law firms directly involved.

Chadbourn & Parke has not experienced workload conflicts or any unreasonable delays in obtaining information from LS due to competing demands upon LS. Horton and Cipollone were ongoing simultaneously, and work conflicts, if any, were worked out between the users and LS. Audrey Wilner indicates that it is probably not necessary for LS to do any further marketing concerning its services, but it might be helpful to the users if the law firms were made aware of how and in what manner each firm is using LS.

In summary, Chadbourn & Parke evaluates LS as "very expensive" but also indispensable. LS provides a valuable service, and it is particularly convenient to Chadbourn & Parke because Chadbourn is located in New York. LS is "battle tested" in litigation and the service that they provide at trial is very good. Thus far, the tempo of litigation has been such that there have not been any noticeable conflicts of user requests when competing demands of litigation and trials have placed demands upon LS. Overall, the Chadbourn & Parke evaluation of LS is favorable and positive.

C. User Report: Shook, Hardy & Bacon

In January and February 1990, Terence Carlson received oral or written communications from eleven Shook, Hardy & Bacon Research Analysts regarding their experiences in using the services of LS.⁹

9. Included were James Cholakakis (part-time toxicologist), William W. Davis, Stella F. Doering, Joan O. Grunewald, Sally Merriam, Nadine Nelson, Mary D. Sawyer, M. Beth Schmidt, Wendell L. Stone, Vicki B. Thompson and LeAnn Zimmerman. In addition, Mr. Carlson interviewed two Information Analysts, Tracey Atchison (continued...)

SHOOK, HARDY & BACON

On a number of points there is general consensus among SHB Research Analysts. The LS database is an essential resource, indispensable in many areas of their work. No commercially available database offers anything remotely similar to the LS database with its scope, analysis and indexing geared so specifically toward the litigation needs of the tobacco industry. LS does an outstanding job of providing background information as well as publications and public statements for active and potential witnesses. SHB has in-house resources for this work, including access to the LS database, but the firm's resources are limited, and witness work could not be done properly without LS. Although individual SHB Research Analysts have varying needs for analytical work from LS, comments in regard to that service are generally favorable. SDIs from LS are helpful current awareness tools, and analysts from LS's User Services group are often called upon to review literature or to cull from a large body of articles the most relevant papers on a given subject. The library at LS is also much larger than SHB's tobacco library and is an important resource. Only rarely does SHB use the services of the LS Analysis Department under the management of Ms. Donna Barrett.

Research Analysts at SHB have such diverse responsibilities that their reliance upon the services of LS varies greatly. Ms. Sawyer, for example, works almost exclusively with company documents and, as a result, has made no substantive requests of LS in several years. Ms. Thompson, on the other hand, says that about 80% of her work relies in one way or another on LS services. Comments from individual analysts should help clarify the extent to which Shook, Hardy relies upon LS.

9. (...continued)

and Catherine Lippert, who regularly conduct searches of the LS database for SHB attorneys and analysts. On February 7, 1990, Frederick Beihl, Leo Dreyer and Terence Carlson conducted an in-depth interview with Vicki Thompson, the Senior Research Analyst at SHB.

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SHOOK, HARDY & BACON

Vicki Thompson makes extensive use of LS in her witness evaluation work and for the identification of relevant literature on particular topics. She says LS's work on potential witnesses is exhaustive, saves her considerable time and provides her with "superb raw materials" for her work. Analysts at LS often screen literature for Ms. Thompson and are skilled at providing her with manageable amounts of literature for her own in-depth review. Occasionally, LS provides detailed analysis at her request. One such project involved an extensive review of animal skin painting research and produced an annotated 147-page notebook of findings and summaries. She is invariably satisfied with both the quality and quantity of work she receives from LS.

LeAnn Zimmerman is not a heavy, direct user of LS but, nevertheless, feels the service is essential. She found the LS lung cancer litigation arguments analysis to be "invaluable" during a recent comprehensive litigation project done for a client. She has worked directly with Gloria DeGregori, Manager of User Services, who has done extensive literature analysis for Ms. Zimmerman in relation to the McSorley case. Ms. Zimmerman could not do much of her work without the LS database.

Wendell Stone believes he has a better-than-average understanding of the operations of LS and the kinds of services the company provides and is quite satisfied with work product from LS. He has contact with Paul Seeman and knows Ms. DeGregori, Ms. Slaughter, Ms. Frankel and Ms. Luca. He finds the SDIs useful and believes LS assists by culling the literature for the most relevant papers for his own research and analysis. Dr. Stone has visited LS and discussed addiction issues with the staff. He believes addiction subjects are difficult to search on the LS database because of diverse terminology and the evolving importance of the issue over time. Nevertheless, he is generally satisfied with search results.

Joan Grunewald is an infrequent, direct user of LS. When she does call LS, she works with Susan Slaughter. LS always responds promptly to requests. Dr. Grunewald has used the C.O.L.D.

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and lung cancer litigation arguments analysis and finds that useful. She believes LS is most helpful in providing a "first cut" of the literature which saves invaluable amounts of time. Although she may not always agree with LS's interpretation of what is "helpful" in the literature, she believes it is important for LS to take a broader approach to the literature and leave final selection decisions on specific issues to analysts at SHB. Dr. Grunewald finds LS's annotated printouts (analysis on an article by article basis) to be very useful.

William Davis views LS as "our most important source of information and studies," and finds LS personnel "very knowledgeable, helpful and dependable." Dr. Davis works primarily in the ETS/indoor air quality areas, and he believes the LS database is far superior to commercial databases. He does find LS indexing to be "cumbersome" and heavily dependant on language used by a particular author. He understands that controlled vocabulary is difficult to develop in an area as rapidly changing as ETS, but notes that there could, perhaps, be some changes in indexing practices. Dr. Davis finds the monthly passive smoking SDIs "very helpful."

Beth Schmidt worked with LS and another law firm in developing C.O.L.D. litigation arguments in 1987. She was impressed with the LS analytical skills and the overall direction of the project. Dr. Schmidt is an infrequent user of LS, partly because much of her work with medical records falls outside of LS's scope. She does receive annotated SDIs on C.O.L.D. each month and finds them generally helpful although broad in scope.

Stella Doering finds LS most helpful in its witness background work. In general, she feels the work LS does for her is "satisfactory." She is not always completely satisfied with the depth of analysis or the scope of searches. She prefers to have searches conducted at SHB and to review all of the literature herself. Ms. Doering finds that some of her work falls outside of LS's scope, and the database cannot help her. In general, she finds

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LS and its database useful, but this does not reduce the amount of reading or analysis she must do herself.

Sally Merriam has had quite positive experiences with LS. She speaks highly of the LS staff who have provided comprehensive and useful work product in response to fairly difficult requests. LS Analysts meet deadlines, or will invariably contact Dr. Merriam if they are unable to do so and will send material gathered to date. She has found all of the analysts she has worked with to be very thorough. They often call her back to discuss and refine requests so that only the most relevant literature is retrieved. Dr. Merriam recommends that LS's coverage of foreign literature be expanded.

James Cholakis is generally very satisfied with LS and its work product. Like others, he finds LS indexing so exhaustive that he sometimes gets unwanted material from database searches. He has learned that the more specific he is in framing requests, the more successful the analyst will be in providing desired results. Dr. Cholakis is very complimentary of an LS product on pesticides literature. He feels it is quite unique and useful.

Nadine Nelson does not use LS heavily. She receives annotated SDIs in the addiction area and updates for the national addiction database. She finds these very helpful. Her primary contacts at LS are Paul Seeman, Linnet Jeremias and Sandra Luca.

Tracey Atchison and Catherine Lippert are trained to conduct author searches and less difficult subject searches on the LS database. They also relay requests to LS personnel for work that cannot be done at SHB. Both of these analysts comment favorably on the responsiveness and cooperation of LS staff. Occasionally an LS library researcher will send more material than necessary to fulfill a request, but communication channels have been improved and problems are minimal. Ms. Atchison is responsible for receipt and supervision of filing of LS microform products. There are very few problems with these products, and LS responds quickly to any notifications of errors.

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D. User Report: Jones, Day, Reavis & Pogue

On February 20, 1990, Frederick Beihl, Leo Dreyer and Terence Carlson talked by telephone with Marianne Corr, an attorney at the Washington office of Jones, Day, Reavis & Pogue.

Ms. Corr makes moderate use of the services offered by LS. She requests copies of specific medical articles and publications by witnesses. LS is "very good" in this area, and she usually receives next-day service. She makes witness requests through Linnet Jeremias. Ms. Corr has no way of knowing how thorough LS is in its witness research because there is no other service against which to compare LS's performance. However, she has never been "surprised" at an interview, meeting, deposition or trial by a publication LS had not identified.

Ms. Corr occasionally requests searches of the LS database and is generally satisfied. Her contact is with Gloria DeGregori of User Services, who discusses requests with Ms. Corr in order to refine searches and focus on the most relevant literature. Ms. Corr prefers to review articles herself and does not request extensive analysis from LS. On occasion she has asked for a limited number of the "best" articles on a given subject. She may end up with a paper she cannot use, e.g., a translation of a foreign article.

Ms. Corr feels that LS is "worth the money" because she does not know where else she could go for similar service. She is unsure of what additional services LS could provide. Ms. Corr has not visited LS and is not certain she would benefit from that. She receives library accession lists and special interest documents, but she is unaware of SDI services or LS's microform products. An annotated printout of Leonard Schuman's publications was helpful, but Ms. Corr does not request any other kind of analytical work product from LS. She sometimes makes such requests of Dr. Frank Colby because she believes he has better work product protection

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than LS does. Dr. Colby works under contract for Jones, Day, Reavis & Pogue.

Ms. Corr was not aware of the company document depository at LS. If it were up to her, LS would not retain this collection.

E. User Report: Jacob, Medinger & Finnegan

The Review Committee met with Diana Manwaring and Alexandra Semchenko at Jacob, Medinger & Finnegan (sometimes referred to as JMF) to obtain user input from that firm regarding its use of LS.

Mss. Manwaring and Semchenko reported that Jacob, Medinger & Finnegan was "fairly content" with the LS work product. Their firm uses LS for literature input, biographical work, bibliographies, and input on expert witnesses. JMF prefers to do analytical work in-house and, as such, will even re-analyze analytical aspects of a work product received from LS.

Their primary contacts at LS are Sue Slaughter, Gloria DeGregori, and Linnet Jeremias. No dissatisfaction was expressed with the assistance provided by LS.

Although Jacob, Medinger & Finnegan seems satisfied with the work product of LS, they do note minor clerical errors, and an occasional "over production" by LS, when the response from LS is perhaps too broad.

Mss. Manwaring and Semchenko report that it is apparently under consideration whether to provide Jacob, Medinger & Finnegan with direct terminal access to the LS database. They have access to the microfiche cards and the firm uses the microfiche in its work.

Jacob, Medinger & Finnegan receives the SDIs and uses them. Marie Marcelli receives SDIs on lung cancer; Diana Manwaring receives SDIs on nicotine, addiction, habituation, and animal experimentation.

JMF has seven to eight users of LS who use LS services in various contexts and various orders of magnitude. The volume

of use of LS by Jacob, Medinger & Finnegan apparently is remaining stable.

In summary, it appears that Jacob, Medinger & Finnegan relies upon the essential core concept of the LS database, but does not rely upon LS for analysis work. To the extent that JMF utilizes the core services of LS for literature retrieval, biographical work, bibliography work and expert witness input, they appear to be satisfied with the LS work product. No major criticisms were registered and no major suggestions for improvement were noted by Mss. Manwaring and Semchenko.

On February 23, 1990, Terence Carlson spoke by telephone with Michael Davidson and Dr. Marie Marcelli of JMF regarding LS. Both Mr. Davidson and Dr. Marcelli are frequent users of LS, and both speak highly of the company's services.

Asked if LS always meets JMF's deadlines, Mr. Davidson said that LS responds "almost always" in a timely fashion. Dr. Marcelli noted that occasionally LS has a conflict with deadlines from other users, but that a manager will alert her to such problems, discuss priorities with her, and will at least partially fulfill her request so that she can continue working. Mr. Davidson added that JMF knows the LS system so well that they are able to frame very specific questions. Given the complexity of LS's database, these very targeted requests take less time on the part of an LS analyst than broader requests which often result in hundreds of identified papers.

Dr. Marcelli works most often with Gloria DeGregori, and they have a good working relationship. Dr. Marcelli is very satisfied with LS's work product. Witness-related requests are relayed to LS by JMF's legal assistants, but Mr. Davidson always reviews the material sent by LS and finds it quite satisfactory.

Neither Mr. Davidson nor Dr. Marcelli is aware of LS's Analysis Department headed by Donna Barrett. Both know Ms. Barrett from years past but are not sure of what kind of work she is doing

now. Dr. Marcelli says that she would not call on Ms. Barrett for assistance because "we operate in different areas."

JMF has not had occasion to request searches of either the lung cancer or C.O.L.D. litigation arguments analysis. Mr. Davidson has read the notebooks prepared by LS on lung cancer and C.O.L.D., and he thought they were a "good review" of the issues.

JMF receives the "aperture card" microform products from LS, and these are used extensively.

Dr. Marcelli is very concerned about the aging of LS's oldest microfilm and hard copy documents. She attends meetings of the American Society of Archivists and is quite knowledgeable on film technologies and products. LS now has documents that are close to 25 years old. Dr. Marcelli expects that we will see an accelerating deterioration of LS's microfilm documents, and she believes this problem should be investigated.

F. User Report: F. G. Colby & Associates

The Review Committee met with Dr. Frank Colby on February 2, 1990, at his offices for the purpose of obtaining his "user input" regarding LS.

Dr. Colby believes that the LS database is "essential" and "indispensable" to the litigation effort. In this regard, he noted that he was one of the "founding fathers" of the consolidated literature database.

In terms of Dr. Colby's overall assessment of current operations, however, he provides LS with a grade of "average" concerning their services. In this regard he expresses concerns about the uniformity of the quality of the LS work product. He states that he checks the work of LS and is not inclined to place himself in a position where he has to rely entirely or solely upon the work product of LS. He stated, for example, that he had recently experienced a mistake in LS work product. However, because he indicated that whenever he encounters a problem with the LS work product, he contacts the Manager of the User Services Department, Gloria

DeGregori, to discuss his "user complaint," the Review Committee did not extensively pursue specifics with Dr. Colby or LS. In the case of the above referenced example, he did contact Gloria, who, upon review, admitted a mistake had been made, due in part, perhaps to time restraints imposed upon LS.

Dr. Colby professes that he does not have any "answers" for the problem that he has noted and can only express a view that perhaps quality control efforts need to be re-doubled, and the review process of LS work product needs to be "tighter." He wonders whether LS relies too much on their own descriptors.

Dr. Colby admits that since 1984 he may have had less activity and involvement with LS. Although he is not sure how many requests per year he submits to LS, the user statistics for 1989 indicate that F.G. Colby & Associates had 70 major requests, and 123 minor requests for a cumulative total of 193 requests which would place Colby & Associates as fourth in terms of usage volume.

Dr. Colby reports that he has one staff member plus himself who engage in LS contacts. He does not have a technical staff to do extensive technical analysis. Dr. Colby reports that he has not talked extensively with personnel at Jones, Day, Reavis & Pogue concerning their experience with LS. Dr. Colby is aware that Jones, Day, Reavis & Pogue will use LS directly. In fact, the user statistics indicate that Jones, Day, Reavis & Pogue had 68 major requests and 35 minor requests for a total of 103 cumulative requests in 1989. Jones, Day, Reavis & Pogue had approximately the same number of major requests as did F.G. Colby & Associates.

Dr. Colby has a set of the microfiche documentation of the LS database and he uses the microfiche frequently to help frame his requests.

In terms of scheduling conflicts, Dr. Colby tries to be cognizant of the demands upon LS which may be placed on the organization by the tempo of the litigation. For example, during Cipollone, Dr. Colby indicated that he was "very conservative" in his requests in order to defer to the Cipollone workload of LS.

Dr. Colby channels his requests primarily through Erika Frankel and Sue Slaughter, both of the User Services Department. Mss. Frankel and Slaughter in turn may assign work on the user requests submitted by Colby to others in User Services. Insofar as document acquisition is concerned, Dr. Colby states that LS does "a grand job" in providing documents and information requested. Colby is generally satisfied with the work of Mss. Frankel and Slaughter and seems to have a higher confidence level when working with them, than when working with LS in general.

In summary, Dr. Colby has perhaps experienced some declining usage of LS since 1984. He appears to have a high confidence in the senior people in the User Services Department, but does not have uniformly high confidence with the overall work product of LS. He is quite pleased with the "pure" document retrieval and acquisition functions of LS and generally regards the overall LS function as "indispensable." He uses the microfiche resources provided by LS and believes those are helpful. His work is not adversely affected by scheduling conflicts or priorities and he seems to recognize the important role that LS can play at the actual time of trials.

G. User Report: Womble, Carlyle, Sandridge & Rice

On February 13, 1990, Frederick Beihl and Terence Carlson spoke by telephone with Jeffrey Furr of Womble, Carlyle, Sandridge & Rice regarding Mr. Furr's experiences with LS. Much of Mr. Furr's work relates to issues in the ETS area, and in that regard, he requests bibliographies of potential witnesses, database searches and passive smoking SDIs from LS.

Mr. Furr believes the LS database is good and contains about 95% of the relevant ETS literature. LS does a "good job" on subject searches of the database retrieving about 80-90% of the citations he expects to see on a given topic. He is less satisfied with SDI services from LS. He feels the passive smoking SDI is somewhat helpful but is "too dated" due to the lag time between LS's

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receipt of a journal and the time an article appears on the database. Mr. Furr has not reported this dissatisfaction to LS, nor has he asked them if there is any way they can expedite processing of the ETS literature. He relies upon a consultant to alert him to the most recent literature.

Mr. Furr also finds it difficult to frame requests of LS because of the necessity of knowing the proper "computer" or "library" language. He, therefore, has asked others to relay his requests to LS.

H. User Report: Arnold & Porter

On February 16, 1990, Terence Carlson spoke by telephone with Catherine Gravley, a legal assistant, at Arnold & Porter. Ms. Gravley visited LS in 1989, and she received training in LS database searching during that visit. She accesses the database primarily to identify specific articles; she does not perform subject searches of the database. Ms. Gravley said the User Services staff has been very helpful and always prompt in providing material she needs. Ms. Gravley reports that she does not make many substantive requests of LS made by Arnold & Porter.

Frederick Beihl, Leo Dreyer and Terence Carlson spoke with Jacqueline Denning on March 7, 1990. Although Ms. Denning has not visited LS, she has become familiar with LS's use of descriptors and has requested subject searches based on LS indexing. She feels LS does a "good job" and is very responsive. Occasionally, she has to go back to LS for a more thorough search when they have not retrieved certain articles she needs. "Usually there is a good reason" why LS has not found those articles, and further discussion with an analyst will produce the desired results. Ms. Denning finds the analysts very knowledgeable, and reports that they can talk to her about search needs. She believes it is important to give the analyst information about cases and discuss the issues with them. LS is prompt if she gives them a deadline. If she does not state

a deadline, it "may take weeks" to get material, but she says that is understandable.

Ms. Denning sometimes requests witness materials from LS, but she often gets such materials from other law firms. She has used LS's lung cancer litigation arguments analysis. Upon her recommendation, LS added a review of literature specific to Boston. Ms. Denning does not receive SDIs. Although she was also not aware of the company document depository at LS, she thinks it could be a "good idea," depending upon the facts and circumstances.

I. User Report: SHB re: Cipollone

The following report was prepared by Terence Carlson shortly after the conclusion of the Cipollone trial.

LS provided very substantial support both before and during the Cipollone trial. This report will not attempt to summarize any pre-trial work; however, without question, LS made a significant contribution in the four years before the case went to trial. They reviewed and analyzed a large body of literature relevant to the medical, addiction and state-of-the-art issues in the case, and they collected, organized and analyzed all publications of plaintiff's and defendants' expert witnesses. The "120 lung cancer points" were used extensively in the preparation of our case.

LS's database was available to us online throughout the trial, and SHB used it on numerous occasions. For Harris' rebuttal cross examination, the database quickly identified the 37 TIRC-funded articles that were cited in the 1964 Surgeon General's Report. In addition, we had at the Teaneck offices a complete set of LS "aperture cards" (articles and abstracts in microform). The cards were used less than the database, but they were critically important during a review of CTR Special Projects literature late in the case. It was important to have these products immediately available at any time, and they were often used on nights and weekends.

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LS extended its normal working hours in January 1988 and conducted business from 8:30 a.m. to 8:00 p.m. weekdays and from 10:00 a.m. to 6:00 p.m. Saturdays and Sundays. This continued until closing arguments were completed in June. Personnel were available during those hours to fill any biomedical or witness-related requests. Several of the managers gave us their home phone numbers for off-hour requests or questions, and we did, on a few occasions, have to make such calls. Articles and library materials were delivered to Teaneck/Newark by either Fax or messenger. This proved very satisfactory, and only minimal problems were encountered.

It would be difficult at this point to resurrect the number and subjects of requests made of LS during the trial. A conservative estimate, however, is that SHB made around 90 trial-related requests from January through June. These ranged from simple requests for copies of articles to substantive requests that called for review and analysis of the literature. We requested literally hundreds of copies of cited references, particularly during our preparation for Harris' testimony. LS reviewed animal studies to substantiate some 30 arguments regarding skin painting as an experimental method and identified the most supportive papers for each argument.

The following is a partial illustrative listing of other requests made of LS during the Cipollone trial:

1. Review papers of Wynder and Hoffman for any research support acknowledgements of an American tobacco company.
2. Provide documentation for a) the occurrence of lung small cell carcinoma in nonsmokers, and b) lung cancer rates and air pollution levels in New York and New Jersey.
3. Find unsuccessful skin painting experiments using cigarette smoke condensate.
4. Find criticisms of A. Roffo's experimental work.
5. Locate literature indicating an increase in human or animal tumor incidence related to stress.
6. Find criticisms of F. Homburger's inhalation work.

7. Provide data on the dosage used in animal carcinogenicity testing and its equivalent in human exposure.

8. Locate literature discussing the importance of autopsy vs. death certificate as confirmation of cause of death.

9. Find reports on U.S. botulism "scares" prior to 1937.

10. Review papers by C. Everett Koop for concessions that people can quit smoking.

11. Find helpful addiction statements by anti-smoking agencies.

12. Refute the claim that the probability or ease of quitting is related to tar and nicotine levels of cigarettes.

Webster & Sheffield also relied heavily on LS during Cipollone. It is important to remember, too, that Chadbourne & Parke was using LS to prepare its case for Girton while Cipollone was underway.

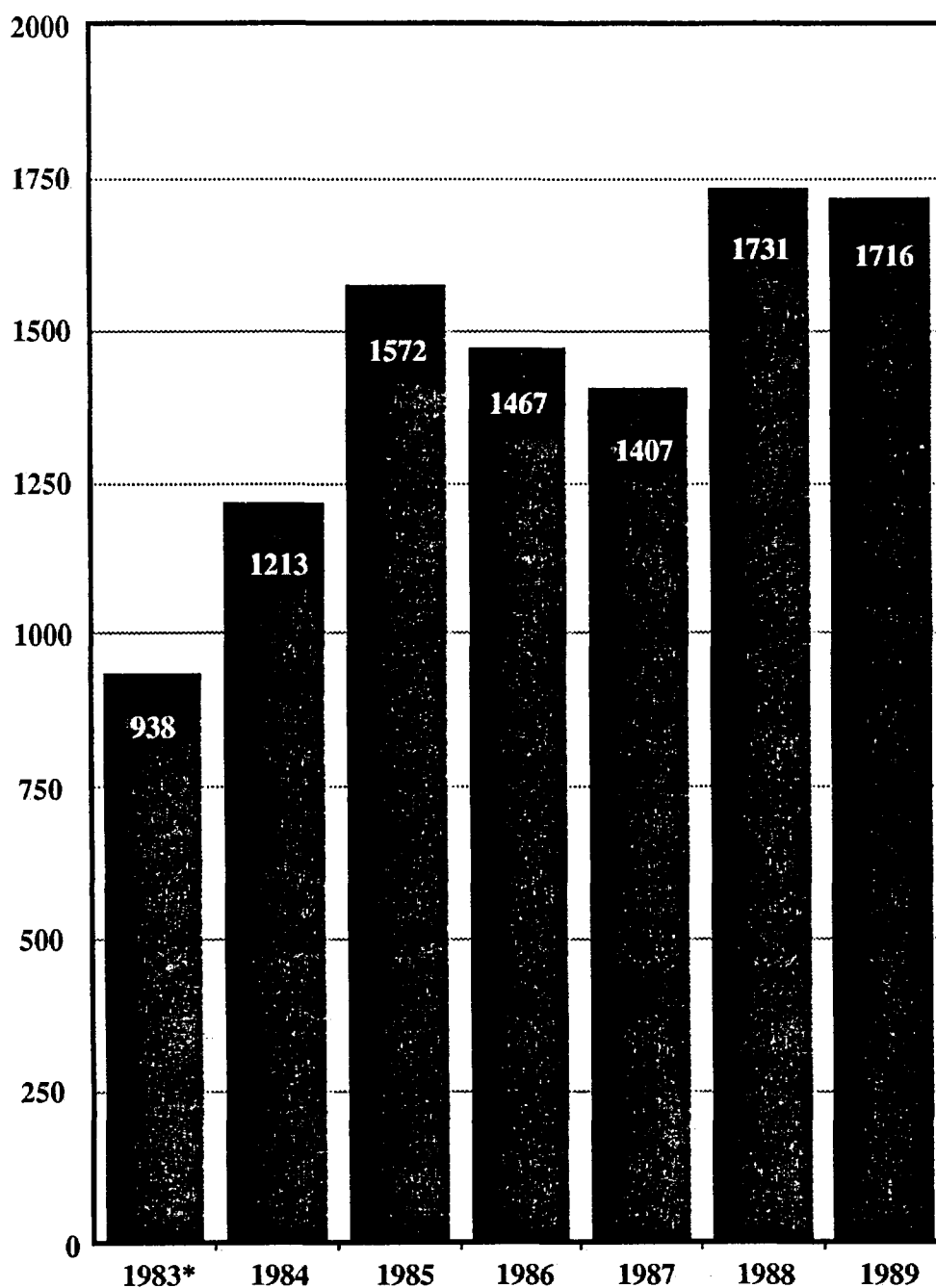
J. Data on User Requests

The preceding paragraphs in this Section summarize user comments concerning the efficiency, responsiveness, quality and accuracy of the services requested by the users from LS. As the preceding paragraphs clearly indicate, LS gets uniformly high marks, although as with any activity, there may be areas for improvement.

Another perspective for evaluating user requests is to look at the volume of requests by users over time. In addition, in order to obtain some measurement or comparison of the total number of user requests with the total LS budget, some graphic comparisons can be compiled and provided.

The charts and graphs contained in this Section summarize data provided by LS concerning user requests and the financial budget.

L. S. Inc.
User Services Department
User Requests

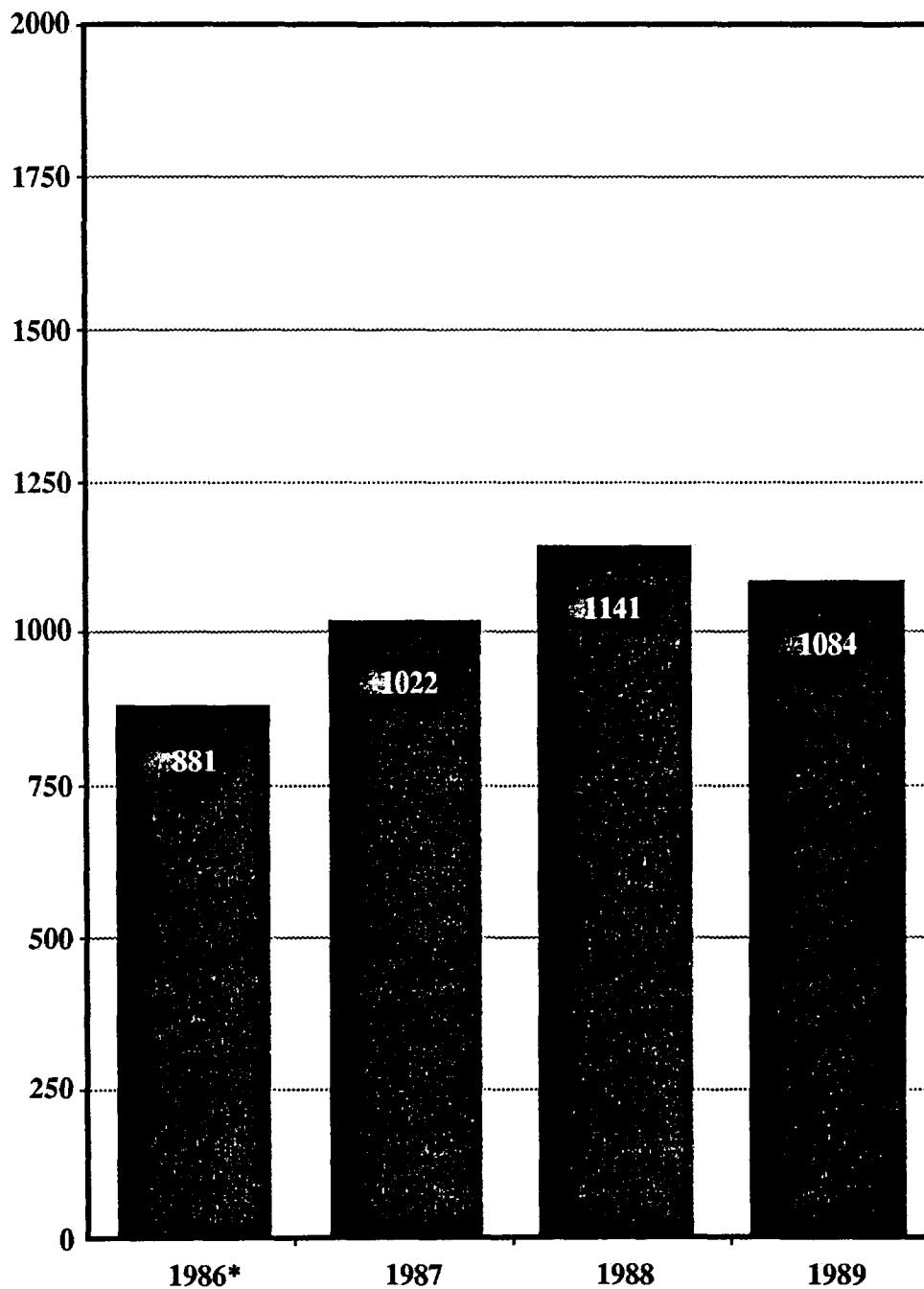


*April 16 - December 31, 1983

Figure 1. Total requests made of the User Services Department from all authorized users by year. Records for 1983 were kept beginning April 16, the date of LS, Inc.'s incorporation. To some extent this graph reflects trial activity. LS assisted with trials in 1985 (*Galbraith and Roysdon*); 1986 (*Marsee*); 1988 (*Horton, Cipollone, Girton*). In 1989, LS provided support for Canadian and Australian litigation as well as preparations for *Kotler*.

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L. S. Inc.
Library Services Department
User Requests



*September 1 - December 31, 1986

Figure 2. Total requests made of the Library Services Department from all authorized users by year. LS began recording user activity for this department on September 1, 1986. LS's witness file function was incorporated into Library Services in 1986.

L. S. Inc.
**Total User Services and
 Library Services Requests**
 by User, 1983-1989

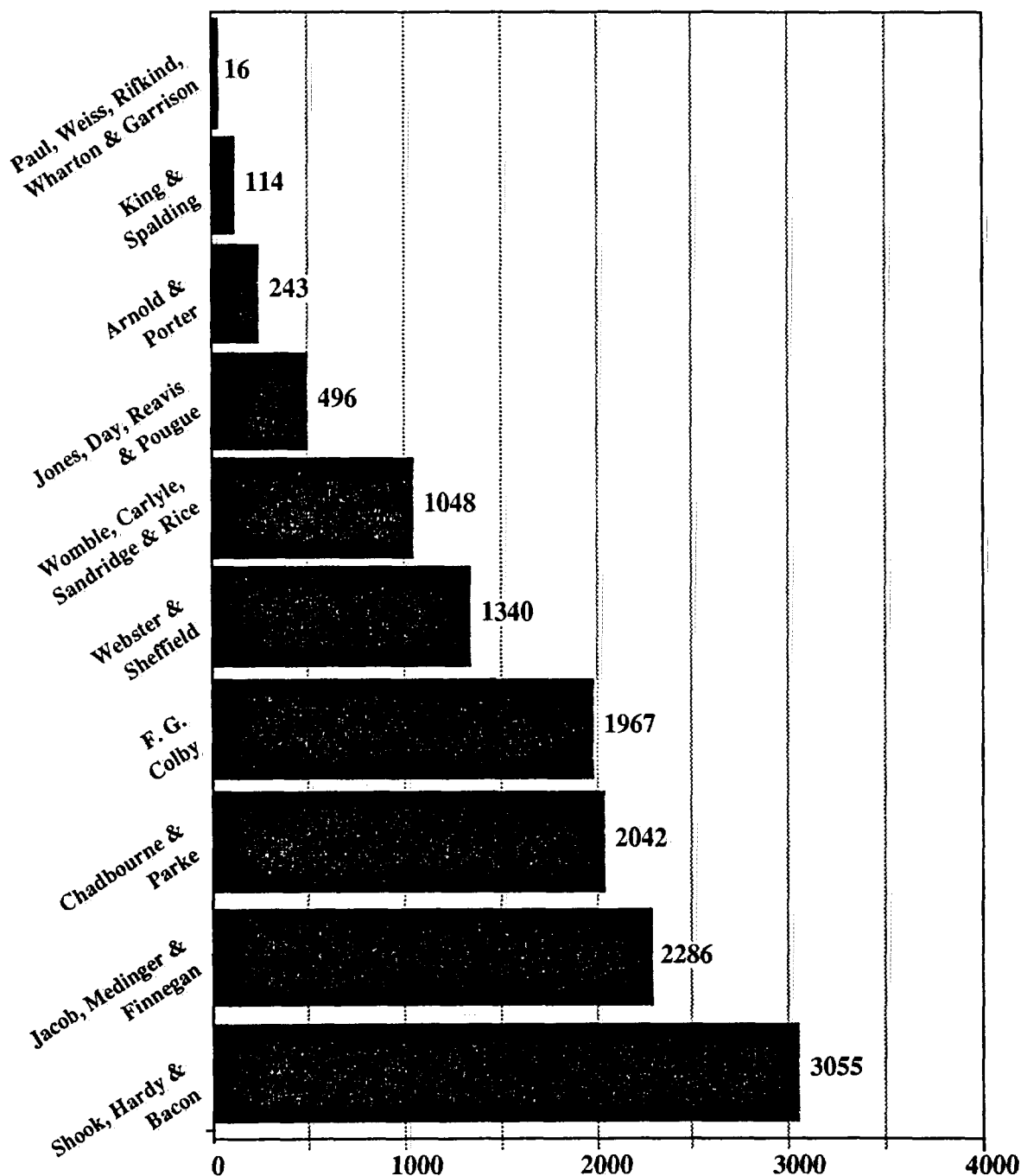


Figure 3. Total requests made of User Services (April 16, 1983 through 1989) and Library Services (September 1, 1986 through 1989) by user. Some of these users did not begin utilizing LS services until after 1983.

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L. S. Inc.

Budget by Division

in Thousands

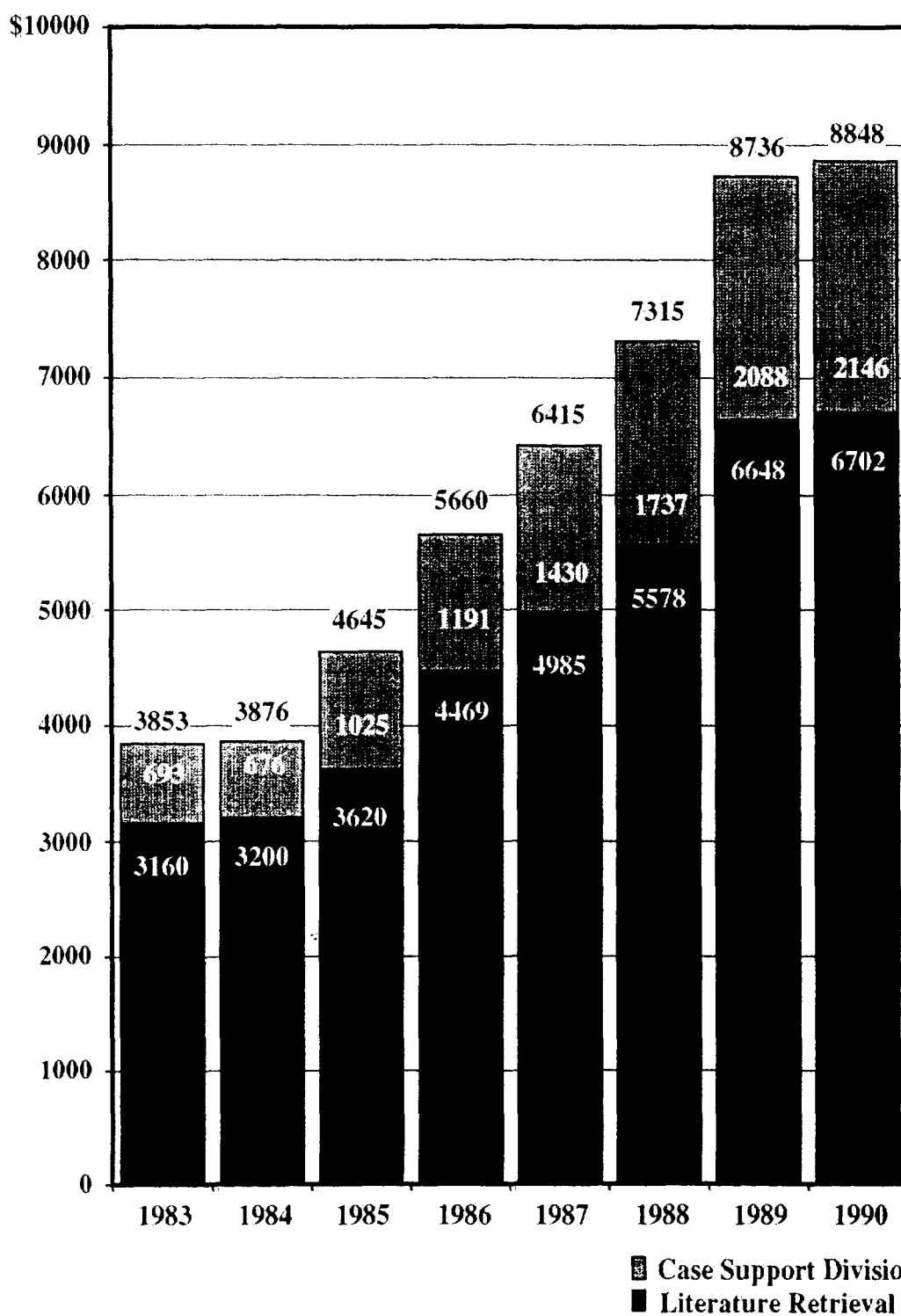


Figure 4. Total L.S. budget and budget by division from 1983 to 1990.

IX. 1990 REVIEW COMMITTEE OVERALL CONCLUSION

The overall evaluation and recommendations of the 1990 Review Committee are set forth in the Executive Summary at the beginning of the Report.

The core functions of LS are well conceived and are indispensable to a successful defense effort in smoking and health litigation.

1990 Review Committee,

Frederick Beihl
Leo P. Dreyer
Terence Carlson

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APPENDIX "A"

HISTORY OF LS: THE GENESIS AND CHARACTER
OF THE LITIGATION SUPPORT SYSTEM

The following information on the history of LS is taken from discovery documents in the Munn case. The information is recorded here for ease of reference.

Since 1954 the six major American cigarette manufacturers have been continuously involved in hundreds of lawsuits in which it was alleged that cigarette smoking caused plaintiff or plaintiff's decedent to contract lung cancer or other diseases. In every single year since 1954, eight or more products liability lawsuits have been pending against one or more of the tobacco companies. Each of those cases has involved highly-technical medical and legal issues, and the tobacco companies' attorneys have had to expend a great deal of time and effort in order to analyze and understand those issues.

From 1954 until the mid-1960s, the attorneys representing the tobacco companies worked generally independently to identify, analyze and understand the medical-legal issues presented in the smoking and health cases they were defending. In the mid-1960s, because of the increased volume of published literature on smoking and health, the attorneys decided that the work on the medical-legal issues should be centralized and that an outside organization should be retained to provide specialized paralegal services, specifically to provide research, filing, and information storage and retrieval services in preparation for legal proceedings.

Since 1966, the litigation support work for the tobacco companies' defense counsel has been performed under the auspices of three organizations. These organizations are: (1) 3i Company ("3i") (1966 to 1971); (2) the Literature Retrieval Division ("LRD") at the Council for Tobacco Research - U.S.A., Inc. ("CTR") (1971 to 1983); and (3) LS, Inc. ("LS") (1983 to present).

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A. 3i Company

The law firm of Covington & Burling, which represented the tobacco companies, entered into a contract in 1966 with 3i, which was headquartered in Philadelphia, Pennsylvania, to compile, organize and analyze pertinent scientific and medical literature for the tobacco companies' attorneys.

Dr. Fred Giller was designated as project officer for 3i and was responsible for overseeing the work which was performed under the contract with Covington & Burling during the period from 1966 through 1971. Dr. Giller has an M.S. in biology and a Ph.D. in pharmacology from the Philadelphia College of Pharmacy and Science, which he received in 1962 and 1965, respectively. Many of the other individuals who have been employed to assist the attorneys also have specialized training in the biological sciences.

The tobacco companies' attorneys, working with Covington & Burling, specified in the "Scope of Coverage" the types of articles and books which were to be identified, acquired, analyzed, stored and retrieved. This "Scope of Coverage," which was originally prepared for the use of 3i, was revised and supplemented for subsequent use by both LRD and LS. The tobacco companies' litigation attorneys also directed the manner in which this work was performed. 3i abstracted and indexed articles pursuant to written guidelines and index terms, which were also revised and supplemented for use by LRD and LS. The litigation attorneys' directions were based on their opinions and mental impressions concerning the products liability cases which they were charged to defend and on their defense strategies.

The articles, abstracts and index terms were used for the sole purpose of responding to inquiries from attorneys representing the tobacco companies. The tobacco companies' litigation attorneys were directed to use the litigation support system only for confidential legal purposes and not for any non-legal business purpose. To the best knowledge of John Denniston, the Covington &

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Burling partner who supervised the 3i project, all users of the 3i system complied with these restrictions.

B. Literature Retrieval Division

In 1971, 3i's litigation support operations were transferred to LRD in New York City, where most of the trial counsel were located. The tobacco companies' litigation attorneys decided to terminate their arrangement with 3i because they were concerned about 3i's financial condition and what might happen to the confidentiality of their litigation support system if 3i were to become insolvent. The tobacco companies' attorneys concluded that the paralegal services being provided by 3i should instead be performed "in house," under their continued supervision and control.

Solely for the sake of administrative convenience, the attorneys decided to locate the litigation support operations in office space in the same building in New York City which housed the offices of CTR, an existing organization funded by the tobacco companies, and to arrange to have CTR handle certain administrative functions for those operations, such as the administration of the payroll and employee benefit plans. CTR's operations remained totally distinct from and unrelated to those of LRD, and LRD's only connection with CTR was CTR's provision of the administrative support.

Dr. Giller began his employment as Assistant Administrator of LRD in 1971, and subsequently became the Director of LRD. During his years at LRD, Dr. Giller worked under the direction of a committee of attorneys which was made up exclusively of attorneys from the law firms which represented the tobacco companies. This committee of attorneys was the same committee as the one which had directed 3i.

During the years 1971-1983, LRD performed the same function of analyzing, summarizing, indexing and retrieving scientific and medical literature at the direction of attorneys which was previously performed by 3i and which is now performed by LS. The

users of LRD were designated by the attorneys who supervised LRD. The users for whom LRD performed analyses were the attorneys which represented the tobacco companies, the legal staffs of their clients, and The Tobacco Institute. All employees of LRD were instructed that they were to provide services only to LRD's authorized users. CTR received some materials and inter-library loan articles from LRD, but, to the best of Dr. Giller's knowledge, LRD did not perform analyses for CTR.

LRD's operations were totally independent of CTR, and the two operations were financed independently and had separate budgets. Giller and the committee of attorneys prepared LRD's budget, without any participation by CTR. The tobacco companies' attorneys approved LRD's budgets and monitored its expenses. LRD's funds were maintained in a bank account separate and apart from any CTR account.

LRD's separate staff worked under Dr. Giller's supervision and were completely independent of CTR and its officers. CTR did not have any control or authority over the performance of work by LRD or any knowledge of the substance of that work. Indeed, CTR was not allowed to participate in any way in the management or operations of LRD. LRD was operating under the control and supervision of the attorneys. In fact, non-LRD employees of CTR knew nothing about LRD's activities and internal operations.

LRD and CTR at all times had two completely separate staffs, offices and libraries. CTR's library was intended for the use of the members of CTR's scientific staff and CTR's Scientific Advisory Board. LRD's primary purpose was to index, analyze and abstract articles for use in litigation by attorneys, and not for use by scientists or by the tobacco companies.

C. LS, Inc.

By 1983, LRD had increased its staff to the extent that it had become an administrative burden to CTR. Therefore, in 1983, LS, Inc. was set up as an independently-administered paralegal organization, with Dr. Giller as its President. All the materials

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developed by 3i under the direction of the tobacco companies' attorneys and maintained and expanded by LRD were transferred to LS.

The tobacco companies are the sole shareholders of LS; they executed a Shareholder Agreement in 1983, which provides that each person elected as a director of LS shall be a shareholder's attorney who is actively involved in litigation relating to smoking and health. Attorneys who represented the tobacco companies in products liability actions and who had been directing this project since 1966 became the members of the Board of Directors of LS.

Four law firms are represented on the Board of Directors of LS and each has entered into a Service Agreement with LS. Under these Agreements, LS is expressly authorized "to perform services for and provide information" to the four law firms "in connection with their preparation for and defense of tobacco and health cases on behalf of certain of their clients." In accordance with the Service Agreements, access to the services of LS is strictly limited to the attorneys and paralegals of the four law firms and the other law firms acting as their co-counsel.

As President of LS, Dr. Giller supervises over 100 employees under the direction of the attorneys who serve on LS's Board of Directors. Many of LS's employees are highly trained with graduate degrees or equivalent experience in the biological sciences, and they apply their scientific and technical backgrounds and training in providing paralegal services to the attorneys.

LS performs the same function that had previously been performed by 3i and LRD: to abstract and analyze publicly-available scientific and medical literature and litigation-related materials for attorneys engaged in the defense of tobacco products liability lawsuits. As was the case with 3i and LRD, LS has been instructed by the attorneys on the Board of Directors as to the nature of the materials which are to be selected from the scientific and medical literature and the manner in which the materials selected are to be

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analyzed, summarized, indexed and maintained at LS for subsequent retrieval and use.

In performing analyses for users, LS will search its database, which includes approximately 180,000 scientific and medical articles that were previously selected and analyzed pursuant to instructions of the tobacco companies' attorneys, and then respond to the users' requests. LS also searches and analyzes literature from public sources such as libraries and commercially-available databases.

From a work product standpoint, Dr. Giller and the other employees of LS and its predecessor organizations function as law firm representatives or paralegals assisting trial counsel involved in smoking and health litigation. Dr. Giller has never held a position with any cigarette manufacturer, nor to the best of his knowledge and belief, has any officer, director, employee or agent of LS, LRD or 3i been employed by a cigarette manufacturer. The tobacco companies have not participated in the litigation support activities of LS and its predecessors. The purpose and activities of LS and its predecessors never were to assist the tobacco companies in product development or to keep abreast of current literature, and the tobacco companies have never had a hand in directing or supervising the work done by LS or its predecessors.

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APPENDIX "B"DISCOVERY OF LS BY PLAINTIFFS IN THE
TOBACCO LITIGATION AND OTHER "SECURITY" ISSUES

One of the primary purposes behind the formation of LS was to more clearly define and delineate work product protections. Discovery in Munn v. Philip Morris, Inc., et al., District Court, Harris County, Texas, No. 85-57812, suggests that, from the standpoint of discovery, the decision to incorporate LS was well conceived.

D. Summary of Munn Discovery

The "discovery trail" begins, not in the Munn case, but in the I.D. Rogers case, another Texas State Court case filed by the CigLit group of attorneys. The Rogers complaint was filed in February 1985. CTR was named a party defendant along with the Tobacco Institute ("TI"). Although CTR challenged the jurisdiction of the Texas State Court in the Rogers case, it entered a general appearance in the Duke case which was later consolidated with Rogers for discovery purposes.

In the Rogers case, plaintiff noticed a deposition of defendant CTR. Ultimately, Robert Gertenbach, President of CTR, was deposed in the Rogers case on October 7 and 8, 1985. It was during the Gertenbach deposition in the Rogers case (beginning on page 119 of the transcript) that information concerning LRD and LSI was first discussed. The genesis of the discussion was a document produced at the deposition, namely the CTR minutes of January 27, 1967. In those minutes a reference was made to the Literature Research Department of the Council and the plaintiff questioned if the CTR library was the successor to the Literature Research Department or if it was a separate branch of CTR. This line of questioning led to information concerning the fact that LRD no longer existed as a part of CTR but was a separate corporate entity, namely LS.

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Shortly after the Gertenbach deposition, the Munn case was filed in Texas on October 18, 1985. CTR was not named a defendant in the original Munn complaint even though TI was named and the complaint alleged concert of action through trade associations. Shortly after the Munn case was filed, plaintiffs in Rogers and Duke moved to impose sanctions and compel discovery against CTR and to take the depositions of Dr. Hockett, Dr. Sommers and Dr. Fred Giller to testify concerning items enumerated in the plaintiffs' third amended notice to take oral deposition. This motion was filed on October 31, 1985. The hearing on that motion made no mention of Dr. Giller. Instead, the Hockett deposition was set and taken in New York on December 16 and 17, 1985, followed immediately by the Sommers deposition on December 17 and 18, 1985.

Switching back to the Munn case, plaintiffs noticed the deposition of Dr. Fred Giller on January 24, 1986. For tactical reasons, plaintiffs decided to pursue the Giller deposition in Munn instead of Rogers. On February 11, 1986, the court reporter issued a certificate of non-appearance of Dr. Giller and plaintiffs moved for sanctions concerning the non-appearance.

There is one further entry in the Rogers case concerning CTR and that is an order that granted CTR an extension of time to produce documents to March 5, 1986, two days after a hearing was scheduled on plaintiffs' motion for sanctions and to compel discovery against CTR in the Munn case. This motion of plaintiffs for sanctions concerning the non-appearance of Dr. Giller used as the basis for taking the deposition of Dr. Giller, the portion of Gertenbach's deposition from the Rogers case that plaintiffs claimed intended to show that the defendants controlled Dr. Giller. In April 1986 the plaintiffs in Munn filed a second amended complaint adding for the first time CTR as a party defendant. It was at this time that several case consolidations for discovery purposes took place. Ultimately, the cases that were consolidated with Munn for discovery purposes were Vater, Davenport and Badeaux.

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In May 1986 the plaintiffs again noticed the deposition of Dr. Fred Giller to be taken on June 10, 1986. CTR filed its answer in the Munn case June 5, 1986. On the same day, an order granting plaintiffs' motion to depose Dr. Frederick Giller was signed by the judge. On June 25, 1986, the defendants filed a motion for a protective order to limit the scope of the forthcoming deposition of Dr. Giller. Plaintiffs filed their opposition to any advance limitation of questioning. There is no ruling nor a transcript of a hearing that appears in the files on this issue.

The Giller deposition was taken on June 30, 1986, and resumed on July 9, 1986. Both of those days produced both a regular deposition during which the plaintiffs' attorneys were present in the court room and an in camera deposition during which the plaintiffs' attorneys were excluded. There is conflicting information at various points in the file as to when those depositions were taken. Dr. Giller confirms that the deposition was taken June 30, July 1 and July 9.

The Giller deposition was followed by a motion by the defendants for a protective order prohibiting disclosure of the in camera testimony of Dr. Giller and the exhibits. This motion was supported by a joint brief to which affidavits of Francis Decker, John Koeltl, Robert Gertenbach, William D. Jenkins and John B. Denniston were attached. Prior to the hearing on this motion, there was an interim stipulation entered into between plaintiffs and the defendants concerning the non-dissemination of the exhibits and the testimony concerning those exhibits in the Giller deposition. This stipulation was entered October 10, 1986. The hearing concerning the motion for protective order took place on August 24, 1986. A subsequent conference with the Master was held on November 21, 1986, followed shortly by Master's Written Order No. 5 regarding the Giller deposition.

The Master's Written Order No. 5 describes the deposition of Dr. Giller and the procedure used for the in camera testimony. Master's Finding No. 1 found that further discovery efforts by

plaintiffs would be necessary to present the issue of whether the use of the 3i materials is protected. In the meantime, the Master found a conditional work product exemption in respect to the 3i materials but excepted those materials which were delivered to the Literature Retrieval Division of CTR. Master's Finding No. 2 found that the Literature Retrieval Division (LRD) was a division of CTR from 1971 to 1983, thus precluding its use for creating attorney-work product. Master's Finding No. 3 found that the evidence was insufficient at this time to determine whether LS could segregate the materials delivered to it by LRD in 1983 and therefore made provisional orders. One of those provisional orders was that defendants' claim of exemption and privilege in respect to materials received and created by LRD was denied. The Master also ruled on specific questions which are attached to that order. The plaintiffs were entitled to a transcript of the in camera testimony of Dr. Giller in response to questions as to which such defendants' objections based on claims of exemption and privilege had been overruled. The defendants would be allowed a reasonable time to seek a writ of mandamus if they so desired.

Both the plaintiffs and the defendants filed objections to Master's Written Order No. 5 in February 1987. A hearing on February 9, 1987, was held before Judge Chambers on the objections to Master Taylor's December 2, 1986, Order No. 5. On February 19, 1987 Judge Chambers issued an order overruling all objections to Master's Written Order No. 5.

In March 1987, Judge Chambers stayed Master's Order No. 5 in order to allow LS 30 days to effect an appeal. The in camera deposition and exhibits thereto were to remain under seal.

Both the defendants and the plaintiffs filed motions with the Court of Appeals for leave to file petitions for writs of mandamus. On July 1, 1987, the Court of Appeals sent notice to counsel denying relator's (defendants') motion for leave to file writ of mandamus and granting relator's motion to seal record of

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original mandamus proceeding. No further action on plaintiffs' motion is noted.

A motion was filed by the defendants in the Supreme Court of Texas in September 1987 for leave to file petition for writ of mandamus. The Court ruled on that motion in October 1987 by denying relator's motion for leave to file writ of mandamus and the motion to seal the record of original mandamus proceedings.

E. Order No. 5 of the Special Master

Following the various motions and proceedings involving discovery in the Munn case, the provisions of Order No. 5 of the Special Master are still in place. They provide:

a. That such defendants' claims of exemption and privilege in respect to the materials received and created by the Literature Retrieval Division of CTR, and in respect to all activities of such CTR division, be and the same are hereby denied, and all objections based on such claims are overruled.

b. That such defendants' objections based on claims of exemption and privilege in respect to questions 1, 2, 3, 4, 6, 8, 10, 12, 13, and 14 are expressly overruled, such questions being identified in Exhibit A to this Order.¹

-
1. 1. The following question was propounded on p. 228 of Vol. 1 of the Giller deposition:

"Would you please describe for us, all of the literature both published and unpublished which the Literature Retrieval Division has selected or collected, abstracted, and stored, which literature pertains to any and all types of harm associated with tobacco use, particularly cigarette smoking?"

2. The following question was propounded on p. 241 of Vol. 1 of Giller deposition:

"Dr. Giller, in respect to the work done by the Literature Retrieval Division of CTR during the years 1971 to 1983, I would ask you to describe the data which was collected
(continued...)"

1. (...continued)

or indexed on individuals and organizations on matters pertaining to smoking and health issues?"

3. The following question was propounded on p. 249 of Vol. 1 of Giller deposition:

"So I will just ask you the question to please describe all the activities of the Literature Retrieval Division in respect to Witness Files and include the nature of the information, the identification given to the various files, how the information was used, who used it, the guidelines that you got for the preparation or working with these files and the overall purposes of these files?"

4. The following question was propounded on p. 58 of Vol. 2 of Giller deposition:

"When we talked about these title words or portion of the title words, are we talking about, oh, just a half a dozen or so? Or are we talking about literally scores of the title words or portions of the title words? . . . Okay, I want you to go ahead and state what these titles were for these searches."

6. The following question was propounded on p. 70 of Vol. 2 of Giller deposition:

"Dr. Giller, while you were at the Literature Retrieval Division from 1971 to 1983, describe any materials that you collected or abstracted or indexed that pertained to cigarette advertising?"

8. The following question was propounded on p. 92 of Vol. 2 of Giller deposition:

"While you were at the Literature Retrieval Division of CTR from 1971 to 1983, describe any materials collected and abstracted or indexed, which pertained to warnings as to risk associated with cigarette smoking."

10. The following question was propounded on p. 94 of Vol. 2 of Giller deposition:

"Dr. Giller, while you were at the Literature Retrieval
(continued...)"

c. That such defendants' objections based on claims of exemption and privilege in respect to questions 5, 15, and 16 are overruled insofar as they pertain to the Literature Retrieval Division of CTR.²

1. (...continued)

Division from 1971 to 1983, describe any materials that were collected, abstracted or indexed which pertained to the chemicals or constituents in cigarette smoke and in tobacco."

12. The following question was propounded on p. 96 of Vol. 2 of Giller deposition:

(Discussing subjects included in the SCOPE OF COVERAGE)
... "And this subject matter, would it include items like -- would it include the chemicals or constituents found in cigarette smoke and tobacco?"

13. The following question was propounded on p. 100 of Vol. 2 of Giller deposition:

"Is the health effects of sidestream smoke, secondhand smoke, or passive smoking, or any of those categories that are contained in this document, SCOPE OF COVERAGE?"

14. The following question was propounded on p. 101 of Vol. 2 of Giller deposition:

"Dr. Giller, in the document, SCOPE OF COVERAGE, which is Camera Ex. A, that you have discussed In Camera, I want you to go through it and identify all the categories that would pertain to the health effects of cigarette smoking."

2. 5. The following question was propounded on p. 59 of Vol. 2 of Giller deposition:

"Since that was done in a relatively brief time let me ask you, Dr. Giller, to describe all selection that was made by you either at 3i or LRD of copies of the Surgeon General's reports, various reports on the health consequences of smoking, and what you did with those reports in respect to analysis, indexing or any other work in respect to them."

(continued...)

d. That such defendants' objections based on claims of exemption and privilege in respect to questions 7, 9, and 11 are sustained at this time.³

e. That such defendants' claims of exemption and privilege for the 3i materials, except for those which came

2. (...continued)

15. The following question was propounded on p. 120 of Vol. 2 of Giller deposition:

"Do you know if your criteria included anything pertaining to Congress, members of Congress, or congressional committees?"

16. The following question was propounded on p. 120 of Vol. 2 of Giller deposition:

"Did your criteria and your SCOPE OF COVERAGE document include any subjects that would involve regulation of the tobacco industry?"

3. 7. The following question was propounded on p. 90-1 of Vol. 2 of Giller deposition:

"While you were at 3i from 1966 to 1983, describe any materials selected, abstracted or indexed, which pertain to cigarette advertising."

9. The following question was propounded on p. 93 of Vol. 2 of Giller deposition:

"Dr. Giller, the previous question inquired about materials pertaining to warnings of risk associated with cigarette smoking, while you were at LRD. I would ask you to answer that same question to describe all materials collected, abstracted or indexed that pertained to warnings of risks associated with cigarette smoking, but where the materials were collected, abstracted or indexed while you were at 3i."

11. The following question was propounded on p. 94 of Vol. 2 of Giller deposition:

"And the follow up question will be for the same information, but instead of being while you were at 3i -- instead of while you were at LRD, it will be while you were at 3i from 1966 to 1971."

into the possession of the Literature Retrieval Division of CTR, are conditionally sustained pending further discovery by plaintiffs on the uses made of such 3i materials.

f. That plaintiffs are entitled to a transcript of the in camera testimony of Dr. Giller in response to questions as to which such defendants' objections based on claims of exemption and privilege have been overruled herein; provided, however, defendants will be allowed a reasonable time to seek a writ of mandamus if they desire to do so.

g. That Exhibits A, B, C, and D as described in Exhibit B hereto shall not be considered a part of the Fred Giller deposition since such exhibits were offered for in camera inspection for the sole purpose of supporting defendants' claims of exemption and privilege.

h. That defendants' motion for protective order is denied in respect to the findings and orders contained herein.

i. That the oral deposition of Dr. Giller will be resumed at a time and place to be set by the Master, allowing a reasonable time for the defendants to seek a writ of mandamus if they desire to do so.

F. Work Product Implications

The discovery of litigation support systems and computerized litigation support systems has increasingly become a matter at issue in litigation. The area is somewhat volatile in nature such that no guarantees can be made regarding discoverability of any particular database or database support system. However, conclusions set forth in Goldenberg, Discovery of Computerized Litigation Support Systems in Federal Court (1987), provide following illustrative conclusions about the issues:

1. Using a computerized litigation support system for documents that are otherwise discoverable will not immunize those documents from discovery. Nor will it strip immunity from documents that are otherwise immune from discovery. In this respect the system is the equivalent of an electronic

file cabinet. Putting a document in the cabinet neither adds to nor subtracts from its discoverability.

2. Information about how the system itself is organized or operates will generally receive maximum protection from discovery at least if the system was developed with the substantial involvement of the lawyers handling the case. This protection should extend to programs, indices, user guides, criteria for document selection, methods of retrieval, and similar information that reflect the opinions or mental impressions of the lawyers. On separate grounds, information about the experts or employees who developed the system will also generally be protected from discovery.

3. There is virtually no support in the case law for requiring a party who has created a computerized litigation support system to turn it over to the other side as part of the discovery process, at least where the lawyers handling the case have been substantially involved in the development of the system and in the selection of the documents to go into it.

4. The sparse authority available on the question of whether a party with such a computerized litigation support system can be required to use it to identify unprivileged documents or to generate other unprivileged information for the opposing party suggests that such a request would be denied. At the very least, the party with the system will have powerful arguments to counter such a request.

5. Most of the several situations in which protection against discovery may be waived are not likely to arise where a computerized litigation support system is involved. Information regarding the organization and operation of the system and the identity of the persons who prepared it will probably be subject to discovery, however, if the party for whom the system was created offers testimony on those subjects. There is also a possibility that the system (and the documents it contains) will lose their protection from discovery if an expert or other witness is given direct access to the system as part of his or her preparation for trial or deposition testimony. As a general matter, however, the sharing of a computerized litigation support system with co-parties or with persons who otherwise share the same strong interest in seeing the litigation end in a particular way should not waive any protection enjoyed by the system against discovery. The same is true if the system is shared with persons working for or at the behest of the client or the client's lawyers.

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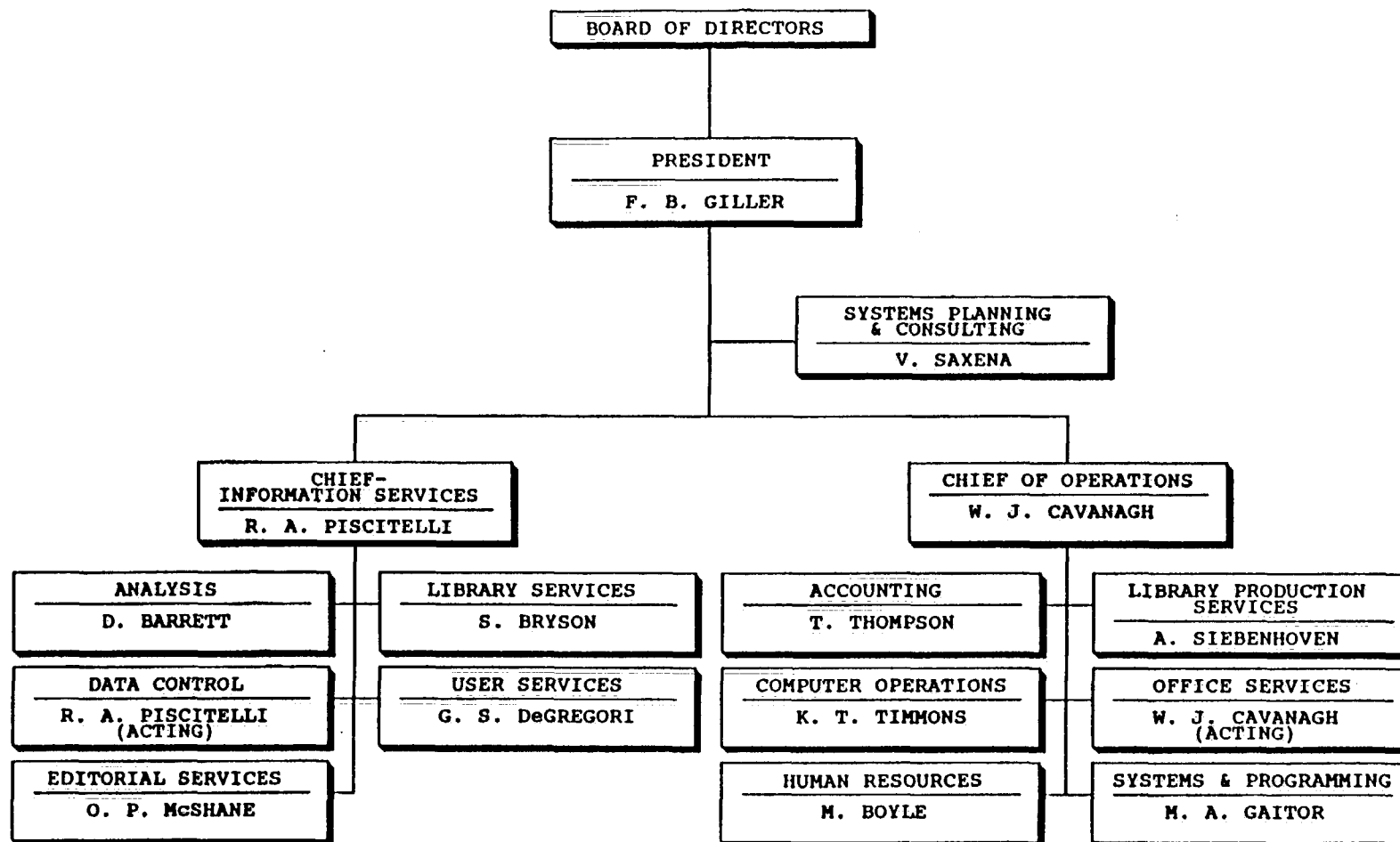
6. A computerized litigation support system developed in connection with a particular case will almost certainly have the same protection against discovery that it enjoys in that first case, in any subsequent case that is related to the first, and is likely to have the same protection even in subsequent unrelated litigation.

Of the materials processed and handled by LS, it appears that the LRD materials received and created by the Literature Retrieval Division of CTR, prior to 1983, are the most vulnerable. Material accessions since 1983 by LS, and the systems and analytical support regarding that material, would appear to have the highest degree of protection.

The work product protection accorded to LS materials should be available to LS even though it is an "outside organization" working under the direction and control of litigation counsel. If more careful consideration of the work product issue is thought to be appropriate by the Board of Directors, in view of the developments in the Munn case, and other developments since LS was first formed, it is recommended that such review be undertaken.

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LS, INC. ORGANIZATION CHART
November 1, 1989

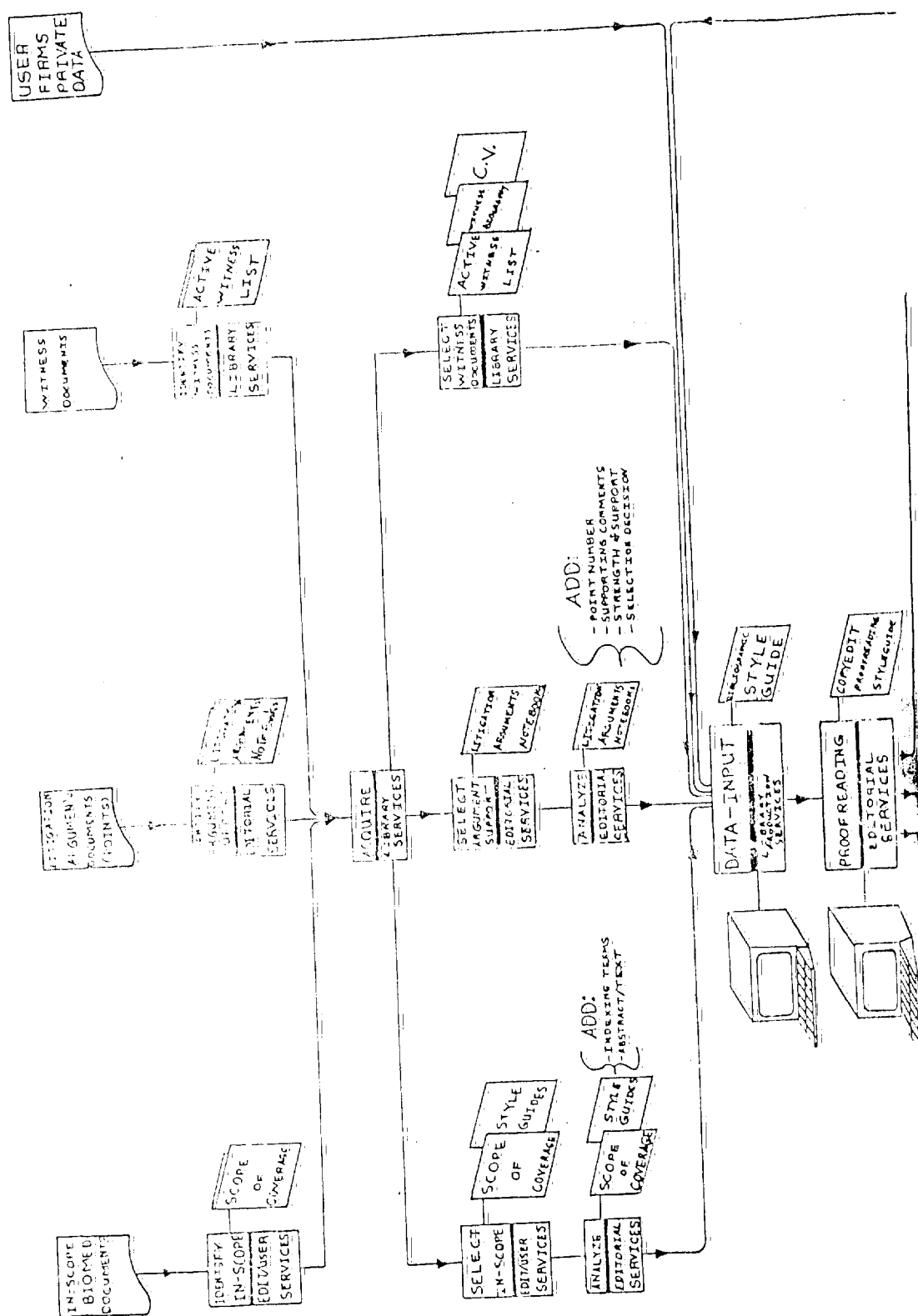


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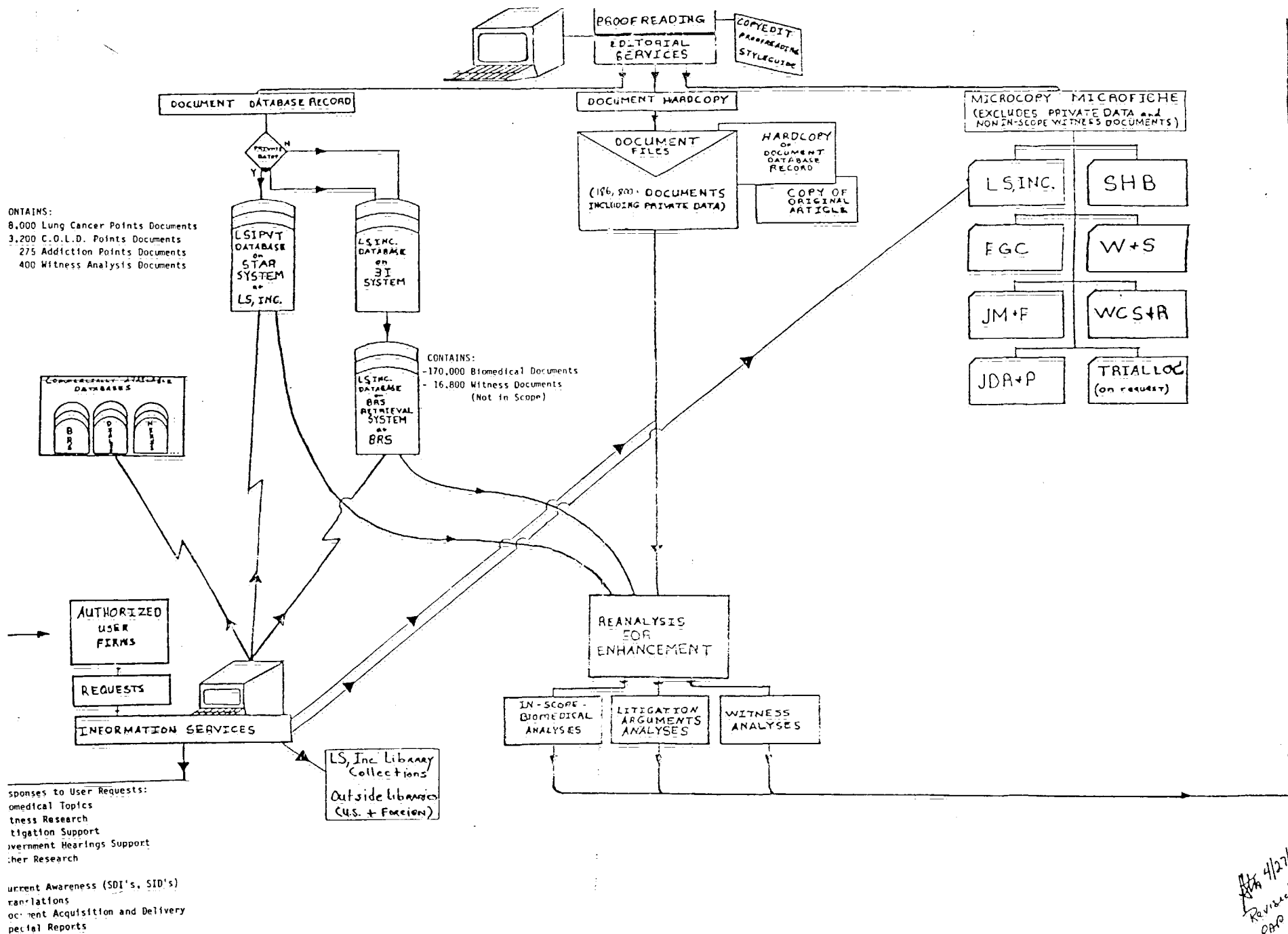
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LS, Inc. Operations



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CONTAINS:
 8,000 Lung Cancer Points Documents
 3,200 C.O.L.D. Points Documents
 275 Addiction Points Documents
 400 Witness Analysis Documents



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